Medical Marijuana Grower/Processor Permit Application

You may apply for one grower/processor permit in this application for any of the medical marijuana regions listed below. A separate application must be submitted for each grower/processor permit sought by the applicant. Please see the Medical Marijuana Organization Permit Application Instructions for a table of the counties within each medical marijuana region.

Please check to indicate the medical marijuana region, and specify the county, for which you are applying for a grower/processor permit:

☒ Northwest
☐ Northcentral
☐ Northeast
☐ Southwest
☐ Southcentral
☐ Southeast

County: Erie
Medical Marijuana Grower/Processor Permit Application

Part A - Applicant Identification and Facility Information

(Scoring Method: Pass/Fail)

For this part, the applicant is required to provide background and contact information for the business or individual applying for a permit.

Section 1 – Applicant Name, Address and Contact Information

Business or Individual Name and Principal Address

<table>
<thead>
<tr>
<th>Business Name, as it appears on the applicant’s certificate of incorporation, charter, bylaws, partnership agreement or other legal business formation documents:</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTI Pennsylvania, LLC.</td>
</tr>
</tbody>
</table>

Other trade names and DBA (doing business as) names:

<table>
<thead>
<tr>
<th>Business Address: 325 W Huron Street, Suite 230</th>
</tr>
</thead>
<tbody>
<tr>
<td>City: Chicago</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

☒ Primary Contact or ☐ Registered Agent for this Application

<table>
<thead>
<tr>
<th>Name: Pete Kadens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address: 325 W Huron Street, Suite 230</td>
</tr>
<tr>
<td>City: Chicago</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

Section 2 – Facility Information

By checking “Yes,” you affirm that you possess the ability to obtain in an expeditious manner the right to use sufficient land, buildings and other premises and equipment to properly carry on the activity described in the medical marijuana grower/processor permit application, and any proposed location for a grower/processor facility.

PROPOSED GROWER/PROCESSOR FACILITY (PLEASE INDICATE THE FACILITY NAME AS YOU WOULD LIKE IT TO APPEAR ON THE PERMIT)

<table>
<thead>
<tr>
<th>Facility Name: GTI Cultivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Address:</td>
</tr>
<tr>
<td>City:</td>
</tr>
<tr>
<td>County:</td>
</tr>
<tr>
<td>☐ Owned by the applicant</td>
</tr>
</tbody>
</table>

Is the facility located in a financially distressed municipality?

| ☒ Yes | ☐ No |

---

[Logo: Pennsylvania Department of Health]
Part B – Diversity Plan

(Scoring Method: 100 Points)

In accordance with Section 615 of the Act (35 P.S. § 10231.615), an applicant shall include with its application a Diversity Plan that promotes and ensures the involvement of diverse participants and diverse groups in ownership, management, employment, and contracting opportunities. Diverse Participants include a person, including a natural person; individuals from diverse racial, ethnic and cultural backgrounds and communities; women; veterans; individuals with disabilities; corporation; partnership; association; trust or other entity; or any combination thereof, who are seeking a permit issued by the Department of Health to grow and process or dispense medical marijuana. Diverse Groups include the following businesses that have been certified by a third-party certifying organization: a disadvantaged business, minority-owned business, and women-owned business as those terms are defined in 74 Pa. C.S. § 303(b); and a service-disabled veteran-owned small business or veteran-owned small business as those terms are defined in 51 Pa. C.S. § 9601.

Section 3 – Diversity Plan

By checking “Yes,” the applicant affirms that it has a diversity plan that establishes a goal of opportunity and access in employment and contracting by the medical marijuana organization. The applicant also affirms that it will make a good faith effort to meet the diversity goals outlined in the diversity plan. Changes to the diversity plan must be approved by the Department of Health in writing.

The applicant further agrees to report participation level and involvement of Diverse Participants and Diverse Groups in the form and frequency required by the Department, and to provide any other information the Department deems appropriate regarding ownership, management, employment, and contracting opportunities by Diverse Participants and Diverse Groups.

DIVERSITY PLAN

In narrative form below, describe a plan that establishes a goal of diversity in ownership, management, employment and contracting to ensure that diverse participants and diverse groups are accorded equality of opportunity. To the extent available, include the following:

1. The diversity status of the Principals, Operators, Financial Backers, and Employees of the Medical Marijuana Organization.
2. An official affirmative action plan for the Medical Marijuana Organization.
3. Internal diversity goals adopted by the Medical Marijuana Organization.
4. A plan for diversity-oriented outreach or events the Medical Marijuana Organization will
conduct during the term of the permit.
5. Contracts with diverse groups and the expected percentage and dollar amount of revenues that will be paid to the diverse groups.
6. Any materials from the Medical Marijuana Organization’s mentoring, training, or professional development programs for diverse groups.
7. Any other information that demonstrates the Medical Marijuana Organization’s commitment to diversity practices.
8. A workforce utilization report including the following information for each job category within the Medical Marijuana Organization:
   a. The total number of persons employed in each job category,
   b. The total number of men employed in each job category,
   c. The total number of women employed in each job category,
   d. The total number of veterans in each job category,
   e. The total number of service-disabled veterans in each job category, and
   f. The total number of members of each racial minority employed in each job category.
9. A narrative description of your ability to record and report on the components of the diversity plan.
TABLE OF CONTENTS

I. DIVERSITY STATUS OF PRINCIPALS, OPERATIONS, FINANCIAL BACKERS & EMPLOYERS ... 3
II. AFFIRMATIVE ACTION PLAN .................................................................................. 7
III. INTERNAL DIVERSITY GOALS .......................................................................... 13
IV. DIVERSITY AND OUTREACH EVENTS .............................................................. 14
V. CONTRACTS WITH DIVERSE GROUPS ............................................................. 19
VI. MENTORING, TRAINING + PROFESSIONAL DEVELOPMENT PROGRAMS .......... 20
VII. COMMITMENT TO DIVERSE PRACTICES ..................................................... 20
VIII. WORKFORCE UTILIZATION REPORT ............................................................ 24
X. RECORDING AND REPORTING ......................................................................... 26
I. DIVERSITY STATUS OF PRINCIPALS, OPERATIONS, FINANCIAL BACKERS & EMPLOYERS
II. AFFIRMATIVE ACTION PLAN
V. CONTRACTS WITH DIVERSE GROUPS
Part C - Applicant Background Information  
(Scoring Method: Pass/Fail) 

For this part the applicant is required to provide background and contact information for the principals, financial backers, operators and employees.

Section 4 – Principals, Financial Backers, Operators and Employees

A. Please list Principals, Financial Backers and Operators

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Peter</td>
<td><strong>Middle Name:</strong></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in the applicant’s business:</strong></td>
</tr>
<tr>
<td><strong>Also known as:</strong></td>
<td><strong>Date of birth:</strong></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
</tr>
<tr>
<td><strong>Address Line 3:</strong></td>
<td><strong>City:</strong></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Benjamin</td>
<td><strong>Middle Name:</strong></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in the applicant’s business:</strong></td>
</tr>
<tr>
<td><strong>Also known as:</strong></td>
<td><strong>Date of birth:</strong></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
</tr>
<tr>
<td><strong>Address Line 3:</strong></td>
<td><strong>City:</strong></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Eugene</td>
<td><strong>Middle Name:</strong></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in the applicant’s business:</strong></td>
</tr>
<tr>
<td><strong>Also known as:</strong></td>
<td><strong>Date of birth:</strong></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
</tr>
<tr>
<td><strong>Address Line 3:</strong></td>
<td><strong>City:</strong></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Anthony</td>
<td><strong>Middle Name:</strong></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in the applicant’s business:</strong></td>
</tr>
<tr>
<td><strong>Also known as:</strong></td>
<td><strong>Date of birth:</strong></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
</tr>
<tr>
<td><strong>Address Line 3:</strong></td>
<td><strong>City:</strong></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Andrew</td>
<td><strong>Middle Name:</strong></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in the applicant’s business:</strong></td>
</tr>
</tbody>
</table>
Pennsylvania Department of Health  
Medical Marijuana Grower/Processor Permit Application

<table>
<thead>
<tr>
<th>Also known as:</th>
<th>Andy</th>
<th>Date of birth:</th>
<th>DOH REDACTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address Line 1:</td>
<td>REDACTED</td>
<td>Address Line 2:</td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td></td>
<td>City:</td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
<td>REDACTED</td>
<td>Fax:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Name and Residential Address

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Charles</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Schnee</th>
<th>Suffix:</th>
<th>M.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td></td>
<td>Title in the applicant’s business:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also known as:</td>
<td></td>
<td>Date of birth:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 1:</td>
<td></td>
<td>Address Line 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td></td>
<td>City:</td>
<td></td>
<td>State:</td>
<td>Zip Code:</td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
<td>REDACTED</td>
<td>Fax:</td>
<td>N/A</td>
<td>Email:</td>
<td>REDACTED</td>
<td></td>
</tr>
</tbody>
</table>

**IF MORE SPACE IS REQUIRED, PLEASE SUBMIT ADDITIONAL INFORMATION ON OTHER INDIVIDUALS IN A SEPARATE DOCUMENT TITLED “PRINCIPALS, FINANCIAL BACKERS AND OPERATORS (CONT'D.)” IN ACCORDANCE WITH THE ATTACHMENT FILE NAME FORMAT REQUIREMENTS AND INCLUDE WITH THE ATTACHMENTS.**

### B. Please list Employees

Please provide the following information for any employees that have been hired to date to work for the applicant listed in this application. If no employees are currently employed, please leave this section blank.

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
<tr>
<td>Also known as:</td>
</tr>
<tr>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 3:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
<tr>
<td>Also known as:</td>
</tr>
<tr>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 3:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
<tr>
<td>Also known as:</td>
</tr>
<tr>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 3:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

pennsylvania  
DEPARTMENT OF HEALTH
### Pennsylvania Department of Health
Medical Marijuana Grower/Processor Permit Application

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Also known as:</td>
<td>Date of birth: MM/DD/YYYY</td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax:</td>
</tr>
</tbody>
</table>

#### Name and Residential Address

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td>Title in the applicant’s business:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also known as:</td>
<td>Date of birth: MM/DD/YYYY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax:</td>
<td>Email:</td>
<td></td>
</tr>
</tbody>
</table>

If more space is required, please submit additional information on other individuals in a separate document titled “Employees (Contd.)” in accordance with the attachment file name format requirements and include it with the attachments.

### Section 5 – Moral Affirmation

By checking “Yes,” you affirm that each principal, financial backer, operator and employee listed in this permit application is of good moral character.

| ☒ Yes | ☐ No |

### Section 6 – Compliance with Applicable Laws and Regulations

By checking “Yes,” you affirm that you, as well as the principals, financial backers, operators and employees listed in this permit application are able to continuously comply with all applicable Commonwealth laws and regulations relating to the operation of a medical marijuana grower/processor facility.

| ☒ Yes | ☐ No |

### Section 7 – Civil and Administrative Action

For the statements below:

- By checking “Yes,” you affirm the statement
- If you check “No,” you must state your reasoning in “Schedule A” below
Part D – Plan of Operation  

(Scoring Method: 550 Points)

A PLAN OF OPERATION IS REQUIRED FOR ALL GROWER/PROCESSOR PERMIT APPLICATIONS. THE PLAN OF OPERATION MUST INCLUDE A TIMETABLE OUTLINING THE STEPS THE APPLICANT WILL TAKE TO BECOME OPERATIONAL WITHIN SIX MONTHS FROM THE DATE OF ISSUANCE OF A PERMIT. THE PLAN OF OPERATION MUST ALSO DESCRIBE HOW THE APPLICANT'S PROPOSED BUSINESS OPERATIONS WILL COMPLY WITH STATUTORY AND REGULATORY REQUIREMENTS NECESSARY FOR THE CONTINUED OPERATION OF THE FACILITY.
Plan of Operation

What must be covered in a Plan of Operation?

Applicants must identify how they will comply with relevant laws and regulations regarding:

- Security and surveillance
- Employee qualifications and training
- Transportation of medical marijuana and medical marijuana products
- Storage of seeds, immature medical marijuana plants, medical marijuana plants, medical marijuana, and medical marijuana products
- Labeling of medical marijuana products
- Inventory management, including management of returns of medical marijuana product that is expired, damaged or recalled
- Appropriate nutrient practice, using fertilizers or hydroponic solutions, and the recording of information on the use of fertilizers and growth additives
- Quality control and testing of medical marijuana and medical marijuana products for potential contamination
- Growing of medical marijuana, including a detailed summary of policies and procedures for its growth and harvest
- Recordkeeping
- Preventing unlawful diversion of medical marijuana and medical marijuana products
- Timetable outlining the steps required for the applicant to become operational within six months from the date of issuance of a permit

By checking “Yes,” you affirm that you are able to continuously maintain effective security, surveillance and accounting control measures to prevent diversion, abuse and other illegal conduct regarding medical marijuana plants and medical marijuana.

Section 8 – Operational Timetable

If issued a permit, please describe below the steps and timeframes for becoming operational as a grower/processor within six months from the date of issuance of a grower/processor permit. Specifically, provide the steps you will take to begin the process for the growing, handling, processing, testing, transporting, and disposing of medical marijuana and medical marijuana products.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Estimated Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Estimated Date</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 9 – Employee Qualifications, Description of Duties and Training

A. PLEASE PROVIDE A DESCRIPTION OF THE DUTIES, RESPONSIBILITIES, AND ROLES OF EACH PRINCIPAL, FINANCIAL BACKER, OPERATOR AND EMPLOYEE.

**Board Chair:** Serves as a voting member of GTI’s Board; Leads the Board in providing leadership, guidance and support to GTI’s CEO, President and executives; Assists with fundraising; Chairs quarterly Board meetings with the assistance of the CEO; Encourages Board's role in strategic planning; Appoints the chairpersons of committees, in consultation with other Board members; Discusses issues confronting the organization with the CEO; Serves as a trusted advisor to the CEO; Monitors financial planning and financial reports; Formally evaluates the performance of the CEO and informally evaluates the effectiveness of the Board members.

**Board Members:** Attend quarterly Board meetings to provide leadership, guidance and support to GTI’s CEO, President and executives; Evaluate annually the performance of the organization in achieving its mission; Approve GTI’s annual budget, audit reports and material business decisions; Stay informed of, and meet all, legal and fiduciary responsibilities; Assist with fundraising; Assist the CEO and Board Chair in identifying and recruiting other Board Members; Partner...
with the CEO and other Board members to ensure that Board resolutions are carried out; Represent GTI to stakeholders; act as an ambassador for the organization; Ensure GTI’s commitment to a diverse Board and staff that reflects the communities GTI serves.

| **CEO**: Provides strategic leadership for the company by working with the Board and management to establish long-range goals, strategies, plans and policies; Plans, develops, organizes, implements, directs and evaluates the organization's fiscal function and performance; Establishes credibility throughout the organization and with the Board as an effective developer of solutions to business challenges; Provides leadership and management to ensure that the mission and core values of the company are put into practice; Participates in the development of GTI’s short and long-term goals; Evaluates and advises on the impact of long range planning and introduces new programs/strategies to achieve company goals; Develops policies and procedures of the organization by way of systems that will improve the overall operation and effectiveness of the corporation; Establishes credibility throughout the organization and with the Board as an effective developer of solutions to business challenges; Provides strategic financial input and leadership on decision making issues affecting the organization; Acts as an advisor on contracts into which GTI may enter; Spearheads the development, communication and implementation of effective growth strategies and processes; Collaborates with executive management to develop and implement plans for the operational infrastructure of systems, processes and personnel designed to accommodate the growth objectives of the company;Motivates and leads a high-performance management team; Attracts, recruits and retains required members of the executive team not currently in place; Provides mentoring as a cornerstone to the management career development program; Raises capital at appropriate valuations to enable the company to achieve its goals.

| **President and Chief Diversity Outreach Officer**: Plans, develops, organizes, implements, directs and evaluates GTI’s market strategies and goals; Participates in the development of the corporation's plans and programs as a strategic partner; Works with GTI’s CEO on long range planning and introduction of new programs/strategies; Reports
<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Counsel/Chief Compliance Officer</td>
<td>Participates in the definition and development of corporate policies, procedures and programs and provides continuing counsel and guidance on legal matters and on legal implications of all matters; Serves as key lawyer/legal advisor on all major business transactions, including acquisitions, divestitures and joint ventures; Judges the merits of major court cases filed against or on behalf of the company, works with the appropriate executives to define a strategic defense and approves settlements of disputes where warranted; Assumes ultimate responsibility for ensuring that the company conducts its business in compliance with applicable laws and regulations; Structures and manages the company’s internal legal function and staff; Oversees the selection, retention, management and evaluation of all outside counsel; Advises on legal aspects of the company’s financing, including assessing and advising on current and future business</td>
</tr>
</tbody>
</table>
structures and legal entities; Monitors changes to federal marijuana law and policy and communicates material developments to the CEO.

**Chief of Security:** Oversees all of GTI’s physical site safety and security; Oversees all of GTI’s information safety and security; Leads operational risk management activities to protect GTI’s facilities and personnel; Oversees GTI’s third party security companies, including guards, delivery drivers, IT consultants and security technology consultants; Oversees workplace security trainings, including HIPAA policies and procedures; Identifies security goals and metrics consistent with GTI’s strategic plan; Manages the development and implementation of GTI’s security procedures including asset protection, workplace violence prevention, diversion prevention, access control systems, video surveillance, etc.; Maintains relationships with local, state and federal law enforcement and other related government agencies; Oversees incident response planning as well as the investigation of security breaches and diversion, and assists with disciplinary and legal matters associated with such breaches as necessary; Works with outside consultants to schedule security audits.

**Chief of Staff:** Oversees human resources, customer experience, strategic planning and project management, and ensures new markets are integrated to successfully align with GTI’s overarching mission, vision and goals; Acts as an adviser to management team; Assists the CEO in facilitating effective decision making; Plans and administers human resources policies; Trains management in interviewing, hiring, terminations, promotions, performance review, safety and sexual harassment; Advises management on employee relations issues; Oversees employee recruiting, onboarding and retention; Launches GTI’s customer experience program at all new facilities; Works with the President, HR and Diversity team to help execute GTI’s Diversity Plan; Leads community forums to educate residents, patients and doctors on the benefits of medical cannabis; Develops company-wide, strategic initiatives such as customer experience, social responsibility, team member engagement and company culture programs; Develops and implements continuous improvement programs; Serves as an inter-departmental liaison.
**Assistant General Counsel:** Works with GTI on the company’s legal affairs; Counsels on legal matters under the supervision of GTI’s General Counsel; Works closely with GTI’s General Counsel and executive team on broad range of business, compliance and regulatory matters; Provides immediate answers to questions based on knowledge and experience without researching the law; Interprets laws, rulings, and regulations for GTI; Confers with outside legal resources when necessary; Counsels GTI on corporate policies; Prepares business contracts.

**B. PLEASE DESCRIBE THE EMPLOYEE QUALIFICATIONS OF EACH PRINCIPAL AND EMPLOYEE.**

**Board Chair:**

**Board Members:**
<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>President and Chief Diversity Outreach Officer</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>General Counsel/Chief Compliance Officer</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>Chief of Security</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>Chief of Staff</td>
<td>[Redacted]</td>
</tr>
<tr>
<td>Assistant General Counsel</td>
<td>[Redacted]</td>
</tr>
</tbody>
</table>

**C.** Please describe the steps the applicant will take to assure that each principal and employee will meet the two-hour training requirement under the Act and regulations.

1. This answer applies to all principals: [Redacted]
2. This answer applies to all EMPLOYEES:
3. 

4. 

5. 

6. 

7. 

8. 

IF MORE SPACE IS REQUIRED FOR ANY OF THE ABOVE THREE COMPONENTS OF SECTION 9 (A, B AND C), PLEASE SUBMIT ADDITIONAL INFORMATION IN A SEPARATE DOCUMENT TITLED “EMPLOYEE QUALIFICATIONS, DESCRIPTION OF DUTIES AND TRAINING (CONTD.)” IN ACCORDANCE WITH THE ATTACHMENT FILE NAME FORMAT REQUIREMENTS AND INCLUDE IT WITH THE ATTACHMENTS.

Section 10 – Security and Surveillance
A GROWER/PROCESSOR FACILITY MUST HAVE SECURITY AND SURVEILLANCE SYSTEMS, UTILIZING COMMERCIAL-GRADE EQUIPMENT, TO PREVENT UNAUTHORIZED ENTRY AND TO PREVENT AND DETECT DIVERSION, THEFT, OR LOSS OF ANY SEEDS, IMMATURE MEDICAL MARIJUANA PLANTS, MEDICAL MARIJUANA PLANTS, MEDICAL MARIJUANA AND MEDICAL MARIJUANA PRODUCTS.

PLEASE PROVIDE A SUMMARY OF YOUR PROPOSED SECURITY AND SURVEILLANCE EQUIPMENT AND MEASURES THAT WILL BE IN PLACE AT YOUR PROPOSED FACILITY AND SITE. THESE MEASURES SHOULD COVER, BUT ARE NOT LIMITED TO, THE FOLLOWING: GENERAL OVERVIEW OF THE EQUIPMENT, MEASURES AND PROCEDURES TO BE USED, ALARM SYSTEMS, SURVEILLANCE SYSTEM, STORAGE, RECORDING CAPABILITY, RECORDS RETENTION, PREMISES ACCESSIBILITY, AND INSPECTION/SERVICING/ALTERATION PROTOCOLS.
## Section 11 – Transportation of Medical Marijuana

<table>
<thead>
<tr>
<th>A. Transportation</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>By checking “Yes,” you affirm that any delivery of medical marijuana to any other medical marijuana grower/processor facility, dispensary, or approved laboratory within the Commonwealth will adhere to the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you check “No” to any statement, you must state the reasoning for doing so at the end of this section. If issued a permit, you must be able to affirm each statement by the time the Department determines you to be operational under the Act and regulations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Medical marijuana will only be delivered between 7 a.m. and 9 p.m.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>• Medical marijuana will not be transported to any location outside of this Commonwealth.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>• A global positioning system will be used to ensure safe, efficient delivery of the medical marijuana to a medical marijuana organization or approved laboratory.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>In addition to having a transport vehicle staffed with a delivery team consisting of at least two individuals, the applicant affirms the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• At least one delivery team member will remain with the vehicle at all times that the vehicle contains medical marijuana.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>• Each delivery team member shall have access to a secure form of communication with the grower/processor, such as a cellular telephone, at all times that the vehicle contains medical marijuana.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>• Upon demand, each delivery team member shall produce an identification badge or card to the Department or its authorized agents, law enforcement or other Federal, State, or local government officials if necessary to perform the government officials’ functions and duties.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>• Each delivery team member shall have a valid driver’s license.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>• While on duty, a delivery team member will not wear any clothing or symbols that may indicate ownership or possession of medical marijuana.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>• Medical marijuana stored inside the transport vehicle may not be visible from the outside of the transport vehicle.</td>
<td>✔️</td>
<td>❌</td>
</tr>
<tr>
<td>• A delivery team shall proceed in a transport vehicle from the facility, where the medical marijuana is loaded, directly to the medical marijuana organization or</td>
<td>✔️</td>
<td>❌</td>
</tr>
</tbody>
</table>
### Pennsylvania Department of Health
### Medical Marijuana Grower/Processor Permit Application

| Approved laboratory, where the medical marijuana is unloaded, without unnecessary delays. Notwithstanding the foregoing, a transport vehicle may make stops at multiple facilities or approved laboratories, as appropriate, to deliver medical marijuana. |
|---|---|

- Any vehicle accidents, diversions, losses, or other reportable events that occur during transport of medical marijuana must be immediately reported to the Department either through a designated phone line established by the Department or by electronic communication with the Department in a manner prescribed by the Department. |

- The Department shall be notified daily of the grower/processor’s delivery schedule, including routes and delivery times, either through a designated phone line established by the Department or by electronic communication with the Department in a manner prescribed by the Department. |

- A transport vehicle is subject to inspection by the Department or its authorized agents, law enforcement or other Federal, State or local government officials if necessary to perform the government officials’ functions and duties. |

- A transport vehicle may be stopped and inspected along its delivery route or at any medical marijuana organization or approved laboratory. |

- If a third-party contractor is used, the contractor must comply with all the transportation requirements listed in the Act and regulations. |

#### B. Transport Manifest

By checking “Yes” to any statement, you affirm that the transport manifest (printed or electronic) that accompanies every transport vehicle will contain the following information and meet the following requirements:

If you check “No” to any statement, you must state the reasoning for doing so at the end of this section. If issued a permit, you must be able to affirm each statement by the time the Department determines you to be operational under the Act and regulations.

- The name, address and permit number of the medical marijuana organization or approved laboratory receiving the delivery, and the name of and contact information for a representative of the medical marijuana organization or approved laboratory. |

- The quantity, by weight or unit, of each medical marijuana harvest batch, harvest lot or process lot contained in the transport, along with the identification number for each batch or lot. |
### PLEASE PROVIDE AN EXPLANATION OF ANY RESPONSES ABOVE THAT WERE ANSWERED AS A “NO” AND HOW YOU WILL MEET THESE REQUIREMENTS BY THE TIME THE DEPARTMENT DETERMINES YOU TO BE OPERATIONAL UNDER THE ACT AND REGULATIONS:


n/a

### C. PLEASE DESCRIBE YOUR PLAN REGARDING THE TRANSPORTATION OF MEDICAL MARIJUANA AND MEDICAL MARIJUANA PRODUCTS. FOR EXAMPLE, EXPLAIN WHETHER YOU PLAN TO MAINTAIN YOUR OWN TRANSPORTATION OPERATION AS PART OF THE FACILITY OPERATION, OR WHETHER YOU WILL USE A THIRD-PARTY CONTRACTOR. IF YOU CHOOSE TO USE YOUR OWN TRANSPORTATION OPERATION, PLEASE PROVIDE THE NUMBER AND TYPE OF VEHICLES THAT WILL BE USED TO TRANSPORT MEDICAL MARIJUANA AND MEDICAL MARIJUANA PRODUCTS, THE TRAINING THAT WILL BE PROVIDED TO EMPLOYEES THAT WILL TRANSPORT MEDICAL MARIJUANA AND MEDICAL MARIJUANA PRODUCTS, AND ANY ADDITIONAL...
MEASURES YOU WILL TAKE TO PREVENT DIVERSION DURING TRANSPORT. IF YOU WILL BE USING A THIRD-PARTY CONTRACTOR FOR TRANSPORTING MEDICAL MARIJUANA AND MEDICAL MARIJUANA PRODUCTS, PLEASE EXPLAIN THE STEPS YOU WILL TAKE TO GUARANTEE THE THIRD-PARTY CONTRACTOR WILL BE COMPLIANT WITH THE TRANSPORTATION REQUIREMENTS UNDER THE ACT AND REGULATIONS.
Section 13 – Packaging and Labeling of Medical Marijuana

A. Packaging Requirements

By checking “Yes” to any statement, you affirm that you will implement a quality control process to ensure that the packaging meets all of the following:

If you check “No” to any statement, you must state the reasoning for doing so at the end of this section. If issued a permit, you must be able to affirm each statement by the time the Department determines you to be operational under the Act and regulations.

- Each form of medical marijuana prepared for sale will be packaged and labeled at its facility. The original seal of a package may not be broken, except for quality control testing at an approved laboratory, for adverse loss investigations conducted by the Department, or by a dispensary that purchased the medical marijuana.
- Medical marijuana will be in a package that minimizes exposure to oxygen.

The packaged medical marijuana will be all of the following:

- Child-resistant
- Tamper-proof or tamper-evident
- Light-resistant and opaque
- Resealable

Please provide an explanation of any responses above that were answered as a “No” and how you will meet these requirements by the time the department determines you to be operational under the Act and Regulations:

n/a

B. Labeling Requirements

By checking “Yes” to any statement, you affirm that the applicant will implement a quality control process to ensure that the label does not bear any of the following:
### Section 13 – Packaging and Labeling of Medical Marijuana

**A. Packaging Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>By checking “Yes” to any statement, you affirm that you will implement a quality control process to ensure that the packaging meets all of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you check “No” to any statement, you must state the reasoning for doing so at the end of this section. If issued a permit, you must be able to affirm each statement by the time the Department determines you to be operational under the Act and regulations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Each form of medical marijuana prepared for sale will be packaged and labeled at its facility. The original seal of a package may not be broken, except for quality control testing at an approved laboratory, for adverse loss investigations conducted by the Department, or by a dispensary that purchased the medical marijuana.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>Medical marijuana will be in a package that minimizes exposure to oxygen.</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

The packaged medical marijuana will be all of the following:

- Child-resistant
- Tamper-proof or tamper-evident
- Light-resistant and opaque
- Resealable

Please provide an explanation of any responses above that were answered as a “No” and how you will meet these requirements by the time the department determines you to be operational under the Act and regulations:

n/a

**B. Labeling Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>By checking “Yes” to any statement, you affirm that the applicant will implement a quality control process to ensure that the label does not bear any of the following:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
If you check “No” to any statement, you must state the reasoning for doing so at the end of this section. If issued a permit, you must be able to affirm each statement by the time the Department determines you to be operational under the Act and regulations.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any resemblance to the trademarked, characteristic or product-specialized packaging of any commercially available food or beverage product.</td>
<td>✗</td>
<td>☑</td>
</tr>
<tr>
<td>Any statement, artwork or design that could reasonably lead an individual to believe that the package contains anything other than medical marijuana.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>Any seal, flag, crest, coat of arms, or other insignia that could reasonably mislead an individual to believe that the product has been endorsed, manufactured, or approved for use by any State, county or municipality or any agency thereof.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>Any cartoon, color scheme, image, graphic or feature that might make the package attractive to children.</td>
<td>☑</td>
<td>✗</td>
</tr>
</tbody>
</table>

Each process lot of medical marijuana will be identified with a unique identifier.

Prior written approval of the Department will be obtained regarding the content of any label to be affixed to a medical marijuana package.

By checking “Yes,” you affirm that each label will:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Be easily readable.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>Be made of weather-resistant and tamper-resistant materials.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>Be conspicuously placed on the package.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>Include the name, address and permit number of the grower/processor.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>List the form, quantity and weight of medical marijuana included in the package.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>List the amount of individual doses contained within the package and the species and percentage of THC and CBD.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>Contain an identifier that is unique to a particular harvest batch of medical marijuana, including the number assigned to each harvest lot or process lot in the harvest batch.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>Include the date the medical marijuana was packaged.</td>
<td>☑</td>
<td>✗</td>
</tr>
<tr>
<td>State the employee identification number of the employee preparing the package and packaging the medical marijuana.</td>
<td>☑</td>
<td>✗</td>
</tr>
</tbody>
</table>
**Pennsylvania Department of Health**  
**Medical Marijuana Grower/Processor Permit Application**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>☒</th>
<th>☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>• State the employee identification number of the employee shipping the package, if different than the employee preparing the package and packaging the medical marijuana.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• Contain the name and address of the dispensary to which the package is to be sold.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• List the date of expiration of the medical marijuana.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• Include instructions for proper storage of the medical marijuana in the package.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• Contain a warning that the medical marijuana must be kept in the original container in which it was dispensed.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• Contain a warning that unauthorized use is unlawful and will subject the purchaser to criminal penalties.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• Contain the following warning stating: This product is for medicinal use only. Women should not consume during pregnancy or while breastfeeding except on the advice of the practitioner who issued the certification and, in the case of breastfeeding, the infant’s pediatrician. This product might impair the ability to drive or operate heavy machinery. Keep out of reach of children.</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

Please provide an explanation of any responses above that were answered as a “No” and how you will meet these requirements by the time the Department determines you to be operational under the Act and Regulations:

n/a

**C. Please describe your process for creating and monitoring the labeling used for medical marijuana products:**
TABLE OF CONTENTS:

I. STAFFING AND TRAINING .......................................................... 3
II. LABELING SUPPLIES, EQUIPMENT, SPECIFICATIONS AND RECONCILIATION 3
III. LABELING FOR MEDICAL MARIJUANA PRODUCTS .................................. 6
IV. MONITORING AND QUALITY ASSURANCE ........................................... 13
V. LABELING RECORDS .......................................................................... 18

COMPLIANCE TABLE ........................................................................... 20

A compliance table at the end of this plan demonstrates GTI’s compliance with all applicable labeling regulations.
I. STAFFING AND TRAINING FOR LABEL CREATION AND MONITORING

II. LABELING SUPPLIES, EQUIPMENT, SPECIFICATIONS AND RECONCILIATION
III. LABELING FOR MEDICAL MARIJUANA PRODUCTS
### LABEL COMPLIANCE CHECKLIST:

<table>
<thead>
<tr>
<th>PER</th>
<th>ITEM</th>
<th>INCLUDES</th>
</tr>
</thead>
<tbody>
<tr>
<td>§151.34(d)(4)</td>
<td>MANUFACTURER STATEMENT:</td>
<td>GTI Pennsylvania, LLC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Address</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Permit Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Telephone Number</td>
</tr>
<tr>
<td>§151.34(d)(11)</td>
<td>Name and Address of Receiving Dispensary</td>
<td></td>
</tr>
</tbody>
</table>

#### PRODUCT IDENTIFYING INFORMATION:

- Product Name
- Form
- Quantity
- Weight
- Amount of Individual Doses
- Species
- % of THC
- % of CBD

#### CONCENTRATION OF:
- Tetrahydrocannabinol (THC)
- Tetrahydrocannabinol acid (THCA)
- Tetrahydrocannabinolvarin (THCV)
- Cannabidiol (CBD)
- Cannabinoladic acid (CBDA)
- Cannabivarin (CBDV)
- Cannabinol (CBN)
- Cannabigerol (CBG)
- Cannabichromene (CBC)
- Any other cannabinoid component at > 0.1%

#### QUALITY ASSURANCE AND TRACEABILITY CODES:

- §151.34(d)(7) Unique Identifying Batch Code
- §151.34(d)(9) Unique Identifying Process Lot Code

#### THE FOLLOWING DATES:

- §151.34(d)(8) Packaged On
- §151.34(d)(12) Expiration
- §151.34(d)(12) Use By*
- §151.34(d)(12) Freeze By*
- §151.34(d)(9) Packaging Employee Identification #
- §151.34(d)(10) Shipping Employee Identification # if different from above

#### SAFETY + CONSIDERATION WARNINGS:

- §151.34(d)(15) Medical marijuana must be kept in the original container in which it was dispensed
- §151.34(d)(16) Unauthorized use is unlawful and will subject the purchaser to criminal penalties
- §151.34(d)(14) This product is for medicinal use only
- §151.34(d)(14) Women should not consume during pregnancy or while breastfeeding except on the advice of the practitioner who issued the certification and, in the case of breastfeeding, the infant's pediatrician
- §151.34(d)(14) This product might impair the ability to drive or operate heavy machinery.
- §151.34(d)(14) Keep out of reach of children.

#### ALLERGY WARNING: (if applicable)

- Food Allergen Labeling and Consumer Protection Act (FALCPA) of 2004
- This product contains, or was produced in a facility that contains: milk, eggs, fish, Crustacean shellfish, tree nuts (e.g., almonds, walnuts, pecans), peanuts, wheat, and soybeans

#### PRODUCT GUIDANCE STATEMENTS, AS APPROPRIATE:

- §151.34(d)(13) Use Instructions
- §151.34(d)(13) Storage Instructions
Image 3.0 shows an example of the comprehensive label GTI will adhere to each product that it manufactures of the **INGESTIBLE** variety:

**MEDICAL MARIJUANA TINCTURE - SATIVA**

0.85 FL. OZ. (25 ML) • CBD 50MG / THC 50MG • 1 SERVING = 2MG THC/1ML

SERVINGS PER CONTAINER: ABOUT 25 • PER SERVING: CBD 2MG / THC 2MG

---

For a sample of comprehensive labels for other types of ingestible medical marijuana products GTI will produce, see Attachment J.
SAMPLE LABEL FOR VAPORIZED MEDICAL MARIJUANA PRODUCTS

Image 3.1 shows an example of the comprehensive label GTI will adhere to each product that it manufactures for VAPORIZATION:

**MEDICAL MARIJUANA RAW OIL - CBD**

1 GRAM
CBD 60% / THC 1%

<table>
<thead>
<tr>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
<th>ACTIVITIES</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>60</td>
<td>Cannabidiol (CBD)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>N/A</td>
<td>Cannabidiol (CBD)</td>
<td>1</td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCA)</td>
<td>1</td>
<td>Cannabidiol (CBD)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>1</td>
<td>Cannabidiol (CBD)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabidiolic acid (CBDOA)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PRODUCT SAFETY WARNING:
- KEEP OUT OF REACH OF CHILDREN: THIS PRODUCT IS FOR MEDICAL USE ONLY.
- Medical marijuana must be kept in the original container in which it was dispensed.
- Unauthorized use is unlawful and will subject the purchaser to criminal penalties.
- This product might impair the ability to drive or operate heavy machinery.
- Women should not consume during pregnancy or while breastfeeding except on the advice of the practitioner who issued the certification and, in the case of breastfeeding, the infant's pediatrician.
- For a sample of comprehensive labels for other types of vaporized medical marijuana products GTI will produce, see Attachment J.
SAMPLE LABEL FOR MEDICAL MARIJUANA PRODUCTS FOR TOPICAL USE

Image 3.2 shows an example of the comprehensive label GTI will adhere to each product that it manufactures for TOPICAL USE:

MEDICAL MARIJUANA CREAM 1:1 - SATIVA

NET WEIGHT 28 GRAMS
100MG TRANSDERMAL COMPOUND • CBD 50MG / 50MG THC

ACTIVE CHEMICALS % ACTIVE CHEMICALS %

| Tetrahydrocannabinoil (THC) | 1 | Cannabidiol (CBD) | 0.01 |
| Tetrahydrocannabinol Acid (THCA) | 20 | Cannabidiolic Acid (CBDA) | 0.01 |
| Tetrahydrocannabinol (THC) | N/A | Cannabidiolic Acid (CBDA) | 0.01 |
| Cannabidiol (CBD) | 20 | Cannabidiolic Acid (CBDA) | 0.01 |
| Cannabidiolic acid (CBDA) | 0.01 |

PRODUCT SAFETY WARNING:

KEEP OUT OF REACH OF CHILDREN. THIS PRODUCT IS FOR MEDICAL USE ONLY. Medical marijuana must be kept in the original container in which it was dispensed. Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

This product may impair the ability to drive or operate heavy machinery. Women should not consume during pregnancy or while breastfeeding except on the advice of the practitioner who issued the certification and in the case of breastfeeding the infant’s pediatrician.

For a sample of comprehensive labels for other types of topical medical marijuana products GTI will produce, see Attachment J.

IV. MONITORING AND QUALITY ASSURANCE
## COMPLIANCE TABLE

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code §1151.28</td>
<td>1, 6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.28(c)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.29</td>
<td>1</td>
</tr>
<tr>
<td>28 Pa. Code §1151.29(a)</td>
<td>9, 14</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34</td>
<td>1</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(a)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(b)</td>
<td>16, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(b)(1)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(b)(2)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(b)(3)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(b)(4)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(c)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)</td>
<td>7, 18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(1)</td>
<td>7, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(2)</td>
<td>7, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(3)</td>
<td>7, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(4)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(5)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(6)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(7)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(8)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(9)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(10)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(11)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(12)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(13)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(14)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(15)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)(16)</td>
<td>9, 14, 17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(e)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(e)(1)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(e)(2)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(e)(3)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(e)(4)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1161.28(d)(2)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1161.28(d)(3)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1161.28(d)(4)</td>
<td>17</td>
</tr>
</tbody>
</table>
Section 14 – Inventory Management

<table>
<thead>
<tr>
<th>A. Electronic Tracking System</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>You acknowledge that you must use the electronic tracking system prescribed by the Department containing the requirements in section 701 of the Act (35 P.S. § 10231.701).</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>You acknowledge that an electronic tracking system that is approved by the Department will be deployed to log, verify, and monitor the receipt, use and sale of seeds, immature medical marijuana plants or medical marijuana plants, the funds received by a grower/processor for the sale of medical marijuana to another medical marijuana organization, the disposal of medical marijuana waste and the recall of defective medical marijuana.</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Inventory Management</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>By checking “Yes” to any statement, you affirm that your grower/processor facility will maintain an accounting of, and an identifying number for, the following inventory data in the electronic tracking system prescribed by the Department:</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>If you check “No” to any statement, you must state the reasoning for doing so at the end of this section. If issued a permit, you must be able to affirm each statement by the time the Department determines you to be operational under the Act and regulations.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• The number, weight, and type of seeds.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• The number of immature medical marijuana plants.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• The number of medical marijuana plants.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• The number of medical marijuana products ready for sale.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• The number of damaged, defective, expired, or contaminated seeds, immature medical marijuana plants, medical marijuana plants and medical marijuana products awaiting disposal.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• Inventory controls and procedures will be established for the conducting of monthly inventory reviews and annual comprehensive inventories of medical marijuana at the facility.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• Inventory reviews of medical marijuana plants in the process of growing and medical marijuana and medical marijuana products that are being stored for future sale shall be conducted monthly.</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>• Comprehensive inventories of seeds, immature medical marijuana plants, medical</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>
Pennsylvania Department of Health  
Medical Marijuana Grower/Processor Permit Application

<table>
<thead>
<tr>
<th>marijuana plants, medical marijuana and medical marijuana products shall be conducted at least annually.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• A written or electronic record of the inventory reviews and comprehensive inventories must be created and maintained.</td>
</tr>
<tr>
<td>• The written or electronic record will include the date of the inventory, a summary of the inventory findings, and the employee identification numbers and titles or positions of the individuals who conducted the inventory.</td>
</tr>
</tbody>
</table>

**PLEASE PROVIDE AN EXPLANATION OF ANY RESPONSES ABOVE THAT WERE ANSWERED AS A “NO” AND HOW YOU WILL MEET THESE REQUIREMENTS BY THE TIME THE DEPARTMENT DETERMINES YOU TO BE OPERATIONAL UNDER THE ACT AND REGULATIONS:**

n/a

**C. PLEASE DESCRIBE YOUR APPROACH REGARDING THE IMPLEMENTATION OF AN INVENTORY MANAGEMENT PROCESS. THIS APPROACH MUST ALSO INCLUDE A PROCESS THAT PROVIDES FOR THE RECALL OF MEDICAL MARIJUANA AND THE MANAGEMENT OF MEDICAL MARIJUANA PRODUCT RETURNS FROM A DISPENSARY:**
Pennsylvania Department of Health
Medical Marijuana Grower/Processor Permit Application

DOH REDACTED
### Section 15 – Management and Disposal of Medical Marijuana Waste

<table>
<thead>
<tr>
<th><strong>A. Medical Marijuana Waste</strong></th>
<th><strong>Yes</strong></th>
<th><strong>No</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>By checking “Yes,” you affirm that medical marijuana waste will be stored, managed, and disposed of in accordance with § 1151.40 (relating to management and disposal of medical marijuana waste).</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

**B. PLEASE DETAIL YOUR PLAN FOR THE MANAGEMENT AND DISPOSAL OF MEDICAL MARIJUANA WASTE, IN ACCORDANCE WITH §§ 1151.22 (RELATING TO PLANS OF OPERATION) AND 1151.40 (RELATING TO MANAGEMENT AND DISPOSAL OF MEDICAL MARIJUANA WASTE):**
Pennsylvania Department of Health
Medical Marijuana Grower/Processor Permit Application

DOH REDACTED
Section 16 – Diversion Prevention

A. Diversion Prevention

You acknowledge that you have the opportunity, only within 30 days from the date the Department determines you to be operational, to import medical marijuana seeds and immature medical marijuana plants.

B. Please provide a summary of the procedures that you will implement at the proposed grower/processor facility and site for the prevention of the unlawful diversion of seeds, immature medical marijuana plants, medical marijuana plants, medical marijuana and medical marijuana products, along with the process that will be followed when evidence of theft/diversion is identified:
Pennsylvania Department of Health
Medical Marijuana Grower/Processor Permit Application
**Pennsylvania Department of Health**  
**Medical Marijuana Grower/Processor Permit Application**

### Section 17 – Growing Practice

<table>
<thead>
<tr>
<th><strong>A. Growing of Medical Marijuana</strong></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>By checking “Yes” to any statement, you affirm that your facility will maintain the following practices for the growing of medical marijuana: If you check “No” to any statement, you must state the reasoning for doing so at the end of this section. If issued a permit, you must be able to affirm each statement by the time the Department determines you to be operational under the Act and regulations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• In accordance with § 1151.27 (requirements for growing and processing medical marijuana), only pesticides, fungicides or herbicides that are listed and published in the Pennsylvania Bulletin will be used.</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>• A log of all actions taken to detect pests or pathogens, and the measures taken for control, will be maintained.</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>• Visual inspections of growing plants and harvested plant material will be performed to ensure there is no visible mold, mildew, pests, rot or grey or black plant material that is greater than an acceptable level as determined by the Department.</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>• A system to monitor, record, and regulate temperature, humidity, ventilation, lighting and water supply will be installed.</td>
<td>☒</td>
<td></td>
</tr>
</tbody>
</table>

**PLEASE PROVIDE AN EXPLANATION OF ANY RESPONSES ABOVE THAT WERE ANSWERED AS A “NO” AND HOW YOU WILL MEET THESE REQUIREMENTS BY THE TIME THE DEPARTMENT DETERMINES YOU TO BE OPERATIONAL UNDER THE ACT AND REGULATIONS:**

n/a

**B. PLEASE PROVIDE A SUMMARY OF WHICH PESTICIDES, IF ANY, WILL BE USED IN THE GROWING PROCESS:**
SECTION 17(b) PESTICIDE + INTEGRATED PEST MANAGEMENT PLAN

INTRODUCTION AND OVERVIEW OF GTI'S INTEGRATED PEST MANAGEMENT PLAN
# TABLE OF CONTENTS:

I. GTI's IPM OPERATIONAL INFRASTRUCTURE WILL PREVENT PESTS ........ 5
II. GTI's IPM CONTROLS WILL PREVENT + ERADICATE PESTS .................. 5
III. GTI's FOUR-TIERED APPROACH FOR TARGETING COMMON PESTS...... 12
IV. PRODUCTS FOR IPM PREVENTION + INTERVENTION .......................... 16
COMPLIANCE TABLE ........................................................................... 21
I. GTI’S IPM OPERATIONAL INFRASTRUCTURE WILL PREVENT PESTS

II. GTI’S IPM CONTROLS WILL PREVENT AND ERADICATE PESTS
III. GTI'S FOUR-TIERED APPROACH FOR TARGETING COMMON PESTS
IV. PRODUCTS FOR IPM PREVENTION + INTERVENTION, INCLUDING PESTICIDES
## COMPLIANCE TABLE

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code §1151</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(a)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(b)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(c)</td>
<td>13</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(e)</td>
<td>13</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(f)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(g)</td>
<td>9</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(a)(5)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)(5)</td>
<td>8</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(a)</td>
<td>1, 16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)</td>
<td>19</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(i)</td>
<td>19</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(ii)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(iii)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(iv)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(v)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(vi)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(vii)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(viii)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(ix)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(2)</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code §1151.43(f)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.44</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.44(e)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.44(b)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.44(b)(1)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.44(b)(2)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.44(b)(3)</td>
<td>10</td>
</tr>
<tr>
<td>3 P.S. §111.21-112</td>
<td>16, 18</td>
</tr>
<tr>
<td>3 P.S. §111.28.28</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §111.28.28(c)</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §111.28.28(e)</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §111.28.28(g)</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §111.28.28(h)</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §111.28.28(j)</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §111.28.28(k)</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §111.28.28(q)</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §111.28.28(e)</td>
<td>19</td>
</tr>
<tr>
<td>3 P.S. §128.52</td>
<td>18</td>
</tr>
<tr>
<td>21 CFR 111</td>
<td>3, 8</td>
</tr>
<tr>
<td>21 CFR 111.15(a)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(b)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(e)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(b)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(m)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(n)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(o)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(p)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(q)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(r)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(s)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(t)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(u)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(v)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(w)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(x)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(y)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(z)</td>
<td>8</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS:

I. CULTIVATION PERSONNEL ................................................................. 5
II. PROPAGATION PHASE ................................................................. 6
III. IRRIGATION + FERTILIZATION ..................................................... 12
IV. VEGETATIVE PHASE ................................................................. 15
V. FLOWERING PHASE ................................................................. 18
VI. HARVEST PHASE ................................................................. 20
VII. FROZEN STORAGE ................................................................. 26
COMPLIANCE TABLE ................................................................. 28
II. PROPAGATION PHASE [21 DAYS]
IV. VEGETATIVE PHASE [6-14 DAYS]
V. FLOWERING PHASE [8-12 WEEKS]
VI. HARVEST PHASE [1-2 DAYS]
VII. FROZEN STORAGE
## COMPLIANCE TABLE

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code §1151.24</td>
<td>1, 3</td>
</tr>
<tr>
<td>28 Pa. Code §1151.24(a)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.24(b)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.24(c)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.24(d)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27</td>
<td>1</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(e)</td>
<td>25</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(g)</td>
<td>25</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(h)</td>
<td>25</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(e)</td>
<td>14</td>
</tr>
<tr>
<td>28 Pa. Code §1171.21</td>
<td>24</td>
</tr>
<tr>
<td>28 Pa. Code §1171.29(c)(1)</td>
<td>24</td>
</tr>
<tr>
<td>21 CFR 111.15(b)</td>
<td>22</td>
</tr>
<tr>
<td>21 CFR 111.15(d)</td>
<td>7</td>
</tr>
<tr>
<td>21 CFR 111.15(e)(2)</td>
<td>14</td>
</tr>
<tr>
<td>21 CFR 111.30(c)</td>
<td>14</td>
</tr>
<tr>
<td>21 CFR 111.35(b)(1)</td>
<td>22</td>
</tr>
<tr>
<td>21 CFR 111.95(b)(2)</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.180(b)(2)</td>
<td>6</td>
</tr>
</tbody>
</table>
Section 18 – Nutrient and Additive Practices

<table>
<thead>
<tr>
<th>A. Nutrient and Growth Additive Practices</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>By checking “Yes” to any statement, you affirm that your facility will maintain the following medical marijuana nutrient and growth processes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If you check “No” to any statement, you must state the reasoning for doing so at the end of this section. If issued a permit, you must be able to affirm each statement by the time the Department determines you to be operational under the Act and regulations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Appropriate nutrient practices will be used.</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>• A fertilizer or hydroponic solution must be of a type, formulation and at a rate to support the healthy growth of plants.</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>• Records of the type and amounts of fertilizer and any growth additives used will be maintained.</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>• No additional active ingredients or materials will be added to the medical marijuana that alters the color, appearance, smell, taste, effect or weight of the medical marijuana, unless the grower/processor has first obtained the prior written approval of the Department.</td>
<td>☒</td>
<td></td>
</tr>
<tr>
<td>• Excipients will be pharmaceutical grade, unless otherwise approved by the Department.</td>
<td>☒</td>
<td></td>
</tr>
</tbody>
</table>

**PLEASE PROVIDE AN EXPLANATION OF ANY RESPONSES ABOVE THAT WERE ANSWERED AS A “No” AND HOW YOU WILL MEET THESE REQUIREMENTS BY THE TIME THE DEPARTMENT DETERMINES YOU TO BE OPERATIONAL UNDER THE ACT AND REGULATIONS:**

n/a

**B. PLEASE PROVIDE DETAILS OF ALL NUTRIENT AND GROWTH ADDITIVES THAT WILL BE UTILIZED AT YOUR FACILITY:**
TABLE OF CONTENTS:

I. SANITATION + QUALITY CONTROLS ................................................................. 5
II. IRRIGATION + NUTRIENT APPLICATION PROCEDURES ............................... 6
III. GROWING MEDIUMS .................................................................................. 9
IV. APPLICATION OF NUTRIENTS .................................................................. 12
V. IDENTIFYING + CORRECTING NUTRIENT DEFICIENCIES ......................... 18
IV. RECORDKEEPING MEASURES ................................................................. 19
COMPLIANCE TABLE ................................................................................. 20
II. IRRIGATION + NUTRIENT APPLICATION PROCEDURES
III. GROWING MEDIUMS
IV. APPLICATION OF NUTRIENTS
V. IDENTIFYING + CORRECTING NUTRIENT DEFICIENCIES
## COMPLIANCE TABLE

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code</td>
<td>8</td>
</tr>
<tr>
<td>§1141.21</td>
<td>8, 14, 15</td>
</tr>
<tr>
<td>§1151.24</td>
<td>3</td>
</tr>
<tr>
<td>§1151.24(d)-(f)</td>
<td>1</td>
</tr>
<tr>
<td>§1151.27(d)(2)</td>
<td>14</td>
</tr>
<tr>
<td>§1151.27(d)(3)</td>
<td>19</td>
</tr>
<tr>
<td>§1151.27(f)</td>
<td>9</td>
</tr>
<tr>
<td>§1151.27(g)</td>
<td>8</td>
</tr>
<tr>
<td>§1151.40(e)</td>
<td>9</td>
</tr>
<tr>
<td>§1511.33(e)</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.10</td>
<td>12</td>
</tr>
<tr>
<td>21 CFR 111.15</td>
<td>12</td>
</tr>
<tr>
<td>21 CFR 111.15(e)(2)</td>
<td>5, 6</td>
</tr>
<tr>
<td>21 CFR 111.23(c)</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.30(c)</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.95(b)(2)</td>
<td>5, 9, 12, 16</td>
</tr>
<tr>
<td>21 CFR 111.180(b)(2)</td>
<td>5, 9, 12, 16</td>
</tr>
<tr>
<td>21 CFR 111.365</td>
<td>12</td>
</tr>
</tbody>
</table>
Section 19 – Processing and Extraction

PLEASE DESCRIBE THE TECHNOLOGIES, METHODS, AND TYPES OF EQUIPMENT YOU WILL EMPLOY TO EXTRACT THE CRITICAL COMPOUNDS FROM MEDICAL MARIJUANA PLANTS TO PRODUCE THE MEDICAL MARIJUANA AND MEDICAL MARIJUANA PRODUCTS, AND THE TYPES OF MEDICAL MARIJUANA PRODUCTS THAT WILL BE PRODUCED:
# TABLE OF CONTENTS:

I. PRE-PROCESSING ............................................................... 3  
II. EXTRACTION & UPGRADING .............................................. 5  
III. PRODUCTS & COMPOUNDING ............................................ 10  
IV. TESTING ........................................................................... 14  
V. PROCESSING PROTOCOLS ............................................... 15
## COMPLIANCE TABLE

<table>
<thead>
<tr>
<th>Reference</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code §1141.21</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151</td>
<td>2</td>
</tr>
<tr>
<td>28 Pa. Code §1151.22(a)</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.22(a)(8)</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.22(a)(9)</td>
<td>15</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(e)</td>
<td>3,5</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(f)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(h)</td>
<td>3,5,17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(i)</td>
<td>2,3,18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(j)</td>
<td>2,16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.28</td>
<td>2,6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.28(a)</td>
<td>11</td>
</tr>
<tr>
<td>28 Pa. Code §1151.28(b)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.28(c)</td>
<td>11,12</td>
</tr>
<tr>
<td>28 Pa. Code §1151.29</td>
<td>14</td>
</tr>
<tr>
<td>28 Pa. Code §1151.31</td>
<td>7</td>
</tr>
<tr>
<td>Code</td>
<td>Section</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>28 Pa. Code §1151.32</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33</td>
<td>8</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)(6)</td>
<td>8</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(b)</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(c)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.40</td>
<td>14, 18</td>
</tr>
<tr>
<td>28 Pa. Code §1171.29(c)(1)</td>
<td>15</td>
</tr>
<tr>
<td>28 Pa. Code §1171.29(d)</td>
<td>15</td>
</tr>
<tr>
<td>28 Pa. Code §1171.31(e)(1)</td>
<td>15</td>
</tr>
<tr>
<td>28 Pa. Code §1171.31(e)(2)</td>
<td>15</td>
</tr>
<tr>
<td>28 Pa. Code §1171.31(e)(2)(iv)</td>
<td>15</td>
</tr>
<tr>
<td>34 Pa. Code Ch. 3a, Subchapter B</td>
<td>18</td>
</tr>
<tr>
<td>34 Pa. Code Ch. 14</td>
<td>18</td>
</tr>
<tr>
<td>34 Pa. Code. 14.4</td>
<td>18</td>
</tr>
<tr>
<td>34 Pa. Code 14.11</td>
<td>18</td>
</tr>
<tr>
<td>34 Pa. Code 14.13</td>
<td>18</td>
</tr>
<tr>
<td>34 Pa. Code 14.21</td>
<td>18</td>
</tr>
</tbody>
</table>
Section 20 – Sanitation and Safety

PLEASE PROVIDE A SUMMARY OF THE INTENDED SANITATION AND SAFETY MEASURES TO BE IMPLEMENTED AT YOUR PROPOSED FACILITY AND SITE. THESE MEASURES SHOULD COVER, BUT ARE NOT LIMITED TO, THE FOLLOWING: A WRITTEN PROCESS FOR CONTAMINATION PREVENTION, PEST PROTECTION PROCEDURES, MEDICAL MARIJUANA HANDLER RESTRICTIONS, HAND-WASHING FACILITIES, AND INSPECTION SCHEDULES TO ENSURE THE ACCURACY OF OPERATIONAL EQUIPMENT.
# TABLE OF CONTENTS:

I. CONTAMINATION PREVENTION ......................................................... 4
II. HAND WASHING FACILITIES AND RESTROOM FACILITIES ............... 10
III. PEST PREVENTION PROCEDURES .................................................... 11
IV. MEDICAL MARIJUANA HANDLER RESTRICTIONS ............................. 12
V. INSPECTION SCHEDULES ................................................................. 19
   COMPLIANCE TABLE ........................................................................ 20
II. HAND WASHING FACILITIES AND RESTROOM FACILITIES
IV. MEDICAL MARIJUANA HANDLER RESTRICTIONS
V. INSPECTION SCHEDULES
## Compliance Table

<table>
<thead>
<tr>
<th>Reference</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code §27.153</td>
<td>15</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(l)(1)</td>
<td>8</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(l)(2)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(l)(3)</td>
<td>7</td>
</tr>
<tr>
<td>28 Pa. Code §1151.31(b)</td>
<td>9</td>
</tr>
<tr>
<td>28 Pa. Code §1151.32(a)</td>
<td>7</td>
</tr>
<tr>
<td>28 Pa. Code §1151.32(b)(2)(ii)</td>
<td>7</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)(1)</td>
<td>8</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)(2)</td>
<td>7</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)(3)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)(4)</td>
<td>8</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)(5)</td>
<td>12</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(a)(6)</td>
<td>9</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(b)</td>
<td>15</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(b)(1)</td>
<td>14</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(b)(2)</td>
<td>16, 18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(b)(3)</td>
<td>12</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(c)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(c)(1)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(c)(2)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(d)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(e)</td>
<td>19</td>
</tr>
<tr>
<td>28 Pa. Code §1151.33(f)</td>
<td>5</td>
</tr>
<tr>
<td>21 CFR 111.15</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.15(a)(1)</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.15(a)(2)</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.15(a)(3)</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.15(a)(4)</td>
<td>7</td>
</tr>
<tr>
<td>21 CFR 111.15(a)(5)</td>
<td>6</td>
</tr>
<tr>
<td>---------------------</td>
<td>---</td>
</tr>
<tr>
<td>21 CFR 111.15(c)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(d)(1)</td>
<td>11</td>
</tr>
<tr>
<td>21 CFR 111.15(d)(2)</td>
<td>7</td>
</tr>
<tr>
<td>21 CFR 111.15(d)(3)</td>
<td>8</td>
</tr>
<tr>
<td>21 CFR 111.15(e)</td>
<td>7</td>
</tr>
<tr>
<td>21 CFR 111.15(f)</td>
<td>7</td>
</tr>
<tr>
<td>21 CFR 111.15(h)</td>
<td>10</td>
</tr>
<tr>
<td>21 CFR 111.15(i)</td>
<td>10</td>
</tr>
<tr>
<td>21 CFR 111.15(j)</td>
<td>7</td>
</tr>
<tr>
<td>21 CFR 111.15(k)</td>
<td>9</td>
</tr>
<tr>
<td>21 CFR 111.20</td>
<td>4</td>
</tr>
<tr>
<td>21 CFR 111.20(a)</td>
<td>4</td>
</tr>
<tr>
<td>21 CFR 111.20(b)</td>
<td>4</td>
</tr>
<tr>
<td>21 CFR 111.20(d)(1)(i)</td>
<td>4</td>
</tr>
<tr>
<td>21 CFR 111.20(d)(1)(ii)</td>
<td>5</td>
</tr>
<tr>
<td>21 CFR 111.20(d)(1)(iii)</td>
<td>5</td>
</tr>
<tr>
<td>21 CFR 111.20(d)(1)(iv)</td>
<td>5</td>
</tr>
<tr>
<td>21 CFR 111.20(d)(1)(v)</td>
<td>5</td>
</tr>
<tr>
<td>21 CFR 111.20(d)(2)</td>
<td>5</td>
</tr>
<tr>
<td>21 CFR 111.20(e)</td>
<td>5</td>
</tr>
<tr>
<td>21 CFR 111.20(f)</td>
<td>5</td>
</tr>
<tr>
<td>21 CFR 111.20(h)</td>
<td>11</td>
</tr>
<tr>
<td>21 CFR 111.75(a)(2)(ii)(A)</td>
<td>9</td>
</tr>
<tr>
<td>21 CFR 111.75(a)(2)(ii)(B)</td>
<td>9</td>
</tr>
<tr>
<td>21 CFR 111.75(a)(2)(ii)(C)</td>
<td>10</td>
</tr>
<tr>
<td>21 CFR 111.75(a)(2)(ii)(D)</td>
<td>10</td>
</tr>
<tr>
<td>21 CFR 111.75(a)(2)(ii)(E)</td>
<td>10</td>
</tr>
<tr>
<td>21 CFR 111.95(b)(2)</td>
<td>9</td>
</tr>
<tr>
<td>21 CFR 111.360</td>
<td>6</td>
</tr>
<tr>
<td>21 CFR 111.605</td>
<td>19</td>
</tr>
</tbody>
</table>
Section 21 – Quality Control and Testing for Potential Contamination

By checking “Yes,” you affirm that quality control measures and testing efforts must be in place to track active ingredients (THC and CBD) and potential contamination of medical marijuana products.

☒ Yes ☐ No

Section 22 – Recordkeeping

PLEASE PROVIDE A SUMMARY OF THE RECORDKEEPING PLAN THAT WILL BE IN PLACE AT YOUR PROPOSED FACILITY AND SITE. THE PLAN SHOULD COVER, BUT IS NOT LIMITED TO, THE FOLLOWING: A SYSTEM FOR MONITORING, RECORDING, AND REGULATING TEMPERATURE, HUMIDITY, VENTILATION, WATER SUPPLY, AND LIGHTING THAT AFFECTS THE GROWTH OF MEDICAL MARIJUANA PLANTS, AN EQUIPMENT MAINTENANCE LOG, AND RECORDS OF INVENTORY AND ALL TRANSACTIONS.
# TABLE OF CONTENTS:

I. ENVIRONMENTAL CONDITIONS ................................................................. 4 
II. EQUIPMENT SANITATION AND MAINTENANCE ...................................... 4 
III. INVENTORY CONTROL RECORDS ........................................................... 5 
IV. PLANT HEALTH AND PEST MANAGEMENT RECORDS ............................. 9 
V. PRODUCT SAFETY AND SANITATION RECORDS ...................................... 11 
VI. QUALITY ASSURANCE RECORDS ......................................................... 12 
VII. TRANSPORTATION RECORDS .............................................................. 13 
VIII. WASTE DISPOSAL RECORDS .............................................................. 14 
IX. HUMAN RESOURCES RECORDS .......................................................... 15 
X. PRODUCT CRISSES RECORDS ............................................................... 15 
XI. SECURITY RECORDS ........................................................................... 17 
XII. WORKPLACE SAFETY RECORDKEEPING ............................................. 20 
XIII. TRAINING RECORDS ...................................................................... 20 
XIV. GOVERNMENT REPORTING AND INSPECTIONS ................................. 21 
COMPLIANCE TABLE ............................................................................. 22
III. INVENTORY CONTROL RECORDS
Pennsylvania Department of Health
Medical Marijuana Grower/Processor Permit Application

IV. PLANT HEALTH AND PEST MANAGEMENT RECORDS
VI. QUALITY ASSURANCE RECORDS
<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code §1141.21</td>
<td>5, 6</td>
</tr>
<tr>
<td>28 Pa. Code §1141.38(a)(3)</td>
<td>19</td>
</tr>
<tr>
<td>28 Pa. Code §1141.45(c)</td>
<td>21</td>
</tr>
<tr>
<td>28 Pa. Code §1141.46(a)</td>
<td>21</td>
</tr>
<tr>
<td>28 Pa. Code §1141.46(a)(i)</td>
<td>21</td>
</tr>
<tr>
<td>28 Pa. Code §1141.46(a)(ii)</td>
<td>21</td>
</tr>
<tr>
<td>28 Pa. Code §1141.46(c)</td>
<td>21</td>
</tr>
<tr>
<td>28 Pa. Code §1141.46(d)</td>
<td>21</td>
</tr>
<tr>
<td>28 Pa. Code §1141.48(c)</td>
<td>20</td>
</tr>
<tr>
<td>28 Pa. Code §1151.24(a)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.24(c)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.25(f)(1)</td>
<td>19</td>
</tr>
<tr>
<td>28 Pa. Code §1151.25(f)(2)</td>
<td>19</td>
</tr>
<tr>
<td>28 Pa. Code §1151.26(a)(4)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.26(b)(3)</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.26(b)(6)(i)</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.26(b)(6)(ii)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.26(e)</td>
<td>18</td>
</tr>
<tr>
<td>28 Pa. Code §1151.26(g)(1)</td>
<td>19</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(c)</td>
<td>9</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(d)(3)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.27(f)</td>
<td>4</td>
</tr>
<tr>
<td>28 Pa. Code §1151.28(c)</td>
<td>7</td>
</tr>
<tr>
<td>28 Pa. Code §1151.29(b)</td>
<td>8</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(a)</td>
<td>5</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(a)(1)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(a)(2)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(a)(3)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(a)(4)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(a)(5)</td>
<td>6</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(b)</td>
<td>9</td>
</tr>
<tr>
<td>28 Pa. Code §1151.30(c)</td>
<td>9</td>
</tr>
<tr>
<td>28 Pa. Code §1151.32(a)</td>
<td>4</td>
</tr>
<tr>
<td>28 Pa. Code §1151.32(b)(2)</td>
<td>4</td>
</tr>
<tr>
<td>28 Pa. Code §1151.34(d)</td>
<td>9</td>
</tr>
<tr>
<td>28 Pa. Code §1151.35(f)</td>
<td>14</td>
</tr>
<tr>
<td>28 Pa. Code §1151.36(a)</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 Pa. Code §1151.36(b)</td>
<td>13</td>
</tr>
<tr>
<td>28 Pa. Code §1151.36(d)</td>
<td>13</td>
</tr>
<tr>
<td>28 Pa. Code §1151.36(e)</td>
<td>13</td>
</tr>
<tr>
<td>28 Pa. Code §1151.38</td>
<td>13</td>
</tr>
<tr>
<td>28 Pa. Code §1151.38(a)</td>
<td>14</td>
</tr>
<tr>
<td>28 Pa. Code §1151.38(c)</td>
<td>14</td>
</tr>
<tr>
<td>28 Pa. Code §1151.39</td>
<td>5</td>
</tr>
<tr>
<td>28 Pa. Code §1151.40(b)</td>
<td>5</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(a)(2)</td>
<td>15</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(1)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(2)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(3)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(4)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(5)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(6)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(7)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(8)</td>
<td>16</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(9)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(9)(i)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(9)(ii)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(9)(iii)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(9)(v)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(9)(v)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.42(g)(10)</td>
<td>17</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)</td>
<td>9</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(i)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(ii)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(iii)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(iv)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(v)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(vi)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(vii)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(viii)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(1)(ix)</td>
<td>10</td>
</tr>
<tr>
<td>28 Pa. Code §1151.43(c)(2)</td>
<td>10</td>
</tr>
</tbody>
</table>
Part E – Applicant Organization, Ownership, Capital and Tax Status
(Scoring Method: 150 Points)

SECTION 23 – ORGANIZATIONAL STRUCTURE

<table>
<thead>
<tr>
<th>Applicant’s Form of Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check One</td>
</tr>
<tr>
<td>□ C-Corporation</td>
</tr>
<tr>
<td>□ S-Corporation</td>
</tr>
<tr>
<td>□ Sole Proprietorship</td>
</tr>
<tr>
<td>□ Partnership</td>
</tr>
<tr>
<td>□ Limited Liability Company</td>
</tr>
<tr>
<td>□ Limited Liability Partnership</td>
</tr>
<tr>
<td>□ Non-Profit Organization</td>
</tr>
<tr>
<td>□ Other (explain):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applicant’s Organization Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Incorporation or Registration: Pennsylvania</td>
</tr>
<tr>
<td>Date of Formation: 08/30/2016</td>
</tr>
<tr>
<td>Business Name on Formation Documents: GTI Pennsylvania, LLC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applicant’s Identification Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Employer ID number:</td>
</tr>
<tr>
<td>PA Unemployment Compensation Account Number: N/A</td>
</tr>
<tr>
<td>PA Department of Revenue Tax number (if applicant is currently doing business in Pennsylvania):</td>
</tr>
<tr>
<td>PA Workers’ Compensation Policy Number (if applicant is currently doing business in Pennsylvania):</td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>

The applicant affirms that workers’ compensation insurance will be obtained by the time the Department determines you to be operational under the Act and regulations. [Yes] [No]

SECTION 24 – BUSINESS HISTORY AND CAPACITY TO OPERATE

Describe your business history and your ability and plan to maintain a successful and financially sustainable operation:
SECTION 24
ROBUST BUSINESS HISTORY

OVERVIEW OF GTI’S PROVEN EXPERIENCE OPERATING SUSTAINABLE BUSINESSES

TABLE OF CONTENTS

I. A TRACK RECORD OF OPERATING SAFE, SUCCESSFUL MEDICAL MARUANA BUSINESSES ................................................................. 2
II. A DIVERSE TEAM WITH DIVERSE EXPERIENCES ...................................................... 7
III. AN EXPERIENCED BOARD OF DIRECTORS .............................................................. 9
IV. GTI’S SOUND & PROVEN BUSINESS PLAN ................................................................. 10
V. BUSINESS FORECAST ............................................................................................... 16
VI. BANKING RELATIONSHIP ....................................................................................... 18
VII. BRINGING GTI’S SUCCESSES TO PENNSYLVANIA .............................................. 19
I. A TRACK RECORD OF OPERATING SAFE, SUCCESSFUL MEDICAL MARIJUANA BUSINESSES
IV. GTI'S SOUND & PROVEN BUSINESS PLAN
## SECTION 25 — CURRENT OFFICERS

Provide the position, title in the applicant’s business, and address information for all current officers, directors, partners or trustees.

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th>First Name: Peter</th>
<th>Middle Name: Albert</th>
<th>Last Name: Kadens</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td></td>
<td>Also known as:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of birth:</td>
<td></td>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td></td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
<td>Fax: N/A</td>
<td>Email:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th>First Name: Eugene</th>
<th>Middle Name: Christopher</th>
<th>Last Name: Green-Monroe</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td></td>
<td>Also known as:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of birth:</td>
<td></td>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td></td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
<td>Fax: N/A</td>
<td>Email:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th>First Name: Benjamin</th>
<th>Middle Name:</th>
<th>Last Name: Kovler</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td></td>
<td>Also known as:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of birth:</td>
<td></td>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td></td>
<td>City:</td>
<td>State: IL</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
<td>Fax: N/A</td>
<td>Email:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th>First Name: Anthony</th>
<th>Middle Name: Valentino</th>
<th>Last Name: Georgiadis</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td></td>
<td>Also known as:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of birth:</td>
<td></td>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td></td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
<td>Fax: N/A</td>
<td>Email:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th>First Name: Andrew</th>
<th>Middle Name: Laurence</th>
<th>Last Name: Grossman</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td></td>
<td>Also known as:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of birth:</td>
<td></td>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td></td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
<td>Fax: N/A</td>
<td>Email:</td>
<td></td>
</tr>
</tbody>
</table>

| Name and Residential Address | First Name: Charles     | Middle Name: Lee            | Last Name: Schnee         | Suffix: M.D. |

370

[pa_state_logo]
Pennsylvania Department of Health
Medical Marijuana Grower/Processor Permit Application

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Also known as:</td>
<td>Date of birth:</td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City: State: Zip Code:</td>
</tr>
<tr>
<td>Phone: Fax: N/A</td>
<td>Email:</td>
</tr>
</tbody>
</table>

Name and Residential Address

<table>
<thead>
<tr>
<th>First Name: David</th>
<th>Middle Name: L</th>
<th>Last Name: Nathan</th>
<th>Suffix: M.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td>Title in the applicant’s business:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also known as:</td>
<td>Date of birth:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City: State: Zip Code:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone: Fax: N/A</td>
<td>Email:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If more space is required, please submit additional information on other officers in a separate document titled “Current Officers (Cont.)” in accordance with the attachment file name format requirements and include it with the attachments.

SECTION 26 – OWNERSHIP

In this section, list all persons with a controlling interest in the business, defined as follows:

(1) For a publicly traded company, voting rights that entitle a person to elect or appoint one or more of the members of the board of directors or other governing board, or the ownership or beneficial holding of 5% or more of the securities of the publicly traded company.

(2) For a privately held entity, the ownership of any security in the entity.

Complete the appropriate section(s) below:

A. For C-corporations, S-corporations, LLCs and LLLCs

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name: Benjamin</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
<tr>
<td>Also known as:</td>
</tr>
<tr>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 3:</td>
</tr>
<tr>
<td>Phone: Fax: N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stock type or class:</th>
<th>Number of shares held:</th>
<th>Date Acquired:</th>
<th>Percentage of outstanding voting stock:</th>
<th>Terms, conditions, rights and privileges:</th>
</tr>
</thead>
</table>

Name and Residential Address

371
**Pennsylvania Department of Health**  
**Medical Marijuana Grower/Processor Permit Application**

<table>
<thead>
<tr>
<th>First Name</th>
<th>Middle Name</th>
<th>Last Name</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter</td>
<td>Albert</td>
<td>Kadens</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>Title in the applicant’s business:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also known as:</td>
<td>Date of birth:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: n/a</td>
<td>Email:</td>
<td></td>
</tr>
<tr>
<td>Stock type or class:</td>
<td>Number of shares held:</td>
<td>Date Acquired:</td>
<td>Percentage of outstanding voting stock:</td>
</tr>
<tr>
<td>Terms, conditions, rights and privileges:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Name</th>
<th>Middle Name</th>
<th>Last Name</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugene</td>
<td>Christopher</td>
<td>Green-Monroe</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>Title in the applicant’s business:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also known as:</td>
<td>Date of birth:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: n/a</td>
<td>Email:</td>
<td></td>
</tr>
<tr>
<td>Stock type or class:</td>
<td>Number of shares held:</td>
<td>Date Acquired:</td>
<td>Percentage of outstanding voting stock:</td>
</tr>
<tr>
<td>Terms, conditions, rights and privileges:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Name</th>
<th>Middle Name</th>
<th>Last Name</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony</td>
<td>Valentino</td>
<td>Georgiadis</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>Title in the applicant’s business:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Also known as:</td>
<td>Date of birth:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: n/a</td>
<td>Email:</td>
<td></td>
</tr>
<tr>
<td>Stock type or class:</td>
<td>Number of shares held:</td>
<td>Date Acquired:</td>
<td>Percentage of outstanding voting stock:</td>
</tr>
<tr>
<td>Terms, conditions, rights and privileges:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Name</th>
<th>Middle Name</th>
<th>Last Name</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrew</td>
<td>Laurence</td>
<td>Grossman</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>Title in the applicant’s business: N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also known as:</td>
<td>Date of birth:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City:</td>
<td>State:</td>
<td>Zip Code:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: n/a</td>
<td>Email:</td>
<td></td>
</tr>
<tr>
<td>Stock type or class:</td>
<td>Number of shares held:</td>
<td>Date Acquired:</td>
<td>Percentage of outstanding voting stock:</td>
</tr>
<tr>
<td>Terms, conditions, rights and privileges:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Pennsylvania Department of Health

**Medical Marijuana Grower/Processor Permit Application**

### Name and Residential Address

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Suffix:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Also known as:</th>
<th>Date of birth: MM/DD/YYYY</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Address Line 1:</th>
<th>Address Line 2:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Address Line 3:</th>
<th>City:</th>
<th>State:</th>
<th>Zip Code:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax:</th>
<th>Email:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Stock type or class:</th>
<th>Number of shares held:</th>
<th>Date Acquired:</th>
<th>Percentage of outstanding voting stock:</th>
<th>Terms, conditions, rights and privileges:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Stock type or class:</th>
<th>Number of shares held:</th>
<th>Date Acquired:</th>
<th>Percentage of outstanding voting stock:</th>
<th>Terms, conditions, rights and privileges:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Stock type or class:</th>
<th>Number of shares held:</th>
<th>Date Acquired:</th>
<th>Percentage of outstanding voting stock:</th>
<th>Terms, conditions, rights and privileges:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Stock type or class:</th>
<th>Number of shares held:</th>
<th>Date Acquired:</th>
<th>Percentage of outstanding voting stock:</th>
<th>Terms, conditions, rights and privileges:</th>
</tr>
</thead>
</table>

---

**Pennsylvania Department of Health**

373
Pennsylvania Department of Health  
Medical Marijuana Grower/Processor Permit Application

<table>
<thead>
<tr>
<th>Stock type or class:</th>
<th>Number of shares held:</th>
<th>Date Acquired:</th>
<th>Percentage of outstanding voting stock:</th>
<th>Terms, conditions, rights and privileges:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Name and Residential Address**

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Also known as:</th>
<th>Date of birth: MM/DD/YYYY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Line 1:</th>
<th>Address Line 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Line 3:</th>
<th>City:</th>
<th>State:</th>
<th>Zip Code:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax:</th>
<th>Email:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IF MORE SPACE IS REQUIRED, PLEASE SUBMIT ADDITIONAL INFORMATION ON OTHER OWNERS OF THE CORPORATION IN A SEPARATE DOCUMENT TITLED “OWNERS OF THE CORPORATIONS (CONT.)” IN ACCORDANCE WITH THE ATTACHMENT FILE NAME FORMAT REQUIREMENTS AND INCLUDE IT WITH THE ATTACHMENTS.

**B. FOR PARTNERSHIPS AND LLPs**

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Also known as:</th>
<th>Date of birth: MM/DD/YYYY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Line 1:</th>
<th>Address Line 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Line 3:</th>
<th>City:</th>
<th>State:</th>
<th>Zip Code:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax:</th>
<th>Email:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner Type:</td>
<td>Percentage of ownership:</td>
<td>Partnership participation from: MM/DD/YYYY</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>□ General/Full Partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Limited Partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Dormant/Silent Partner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
<tr>
<td>Also known as:</td>
</tr>
<tr>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 3:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

| Partner Type: | Percentage of ownership: | Partnership participation from: MM/DD/YYYY | Description of participation in operation of the applicant: |
|--------------|--------------------------|------------------------------------------|________________________________________________________|
| □ General/Full Partner |                          |                                          |                                                        |
| □ Limited Partner     |                          |                                          |                                                        |
| □ Dormant/Silent Partner |                         |                                          |                                                        |
| □ Other:               |                          |                                          |                                                        |

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
<tr>
<td>Also known as:</td>
</tr>
<tr>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 3:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

| Partner Type: | Percentage of ownership: | Partnership participation from: MM/DD/YYYY | Description of participation in operation of the applicant: |
|--------------|--------------------------|------------------------------------------|________________________________________________________|
| □ General/Full Partner |                          |                                          |                                                        |
| □ Limited Partner     |                          |                                          |                                                        |
| □ Dormant/Silent Partner |                         |                                          |                                                        |
| □ Other:               |                          |                                          |                                                        |
Pennsylvania Department of Health  
Medical Marijuana Grower/Processor Permit Application

<table>
<thead>
<tr>
<th>□ Other:</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

**Name and Residential Address**

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Suffix:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Also known as:</td>
<td>Date of birth: MM/DD/YYYY</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Line 1:</th>
<th>Address Line 2:</th>
<th></th>
</tr>
</thead>
</table>

| Address Line 3: | City: | State: | Zip Code: | |
| --- | --- | --- | --- |

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax:</th>
<th>Email:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Partner Type:</th>
<th>Percentage of ownership:</th>
<th>Partnership participation from: MM/DD/YYYY</th>
<th>Description of participation in operation of the applicant:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>□ General/Full Partner</th>
<th>□ Limited Partner</th>
<th>□ Dormant/Silent Partner</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>□ Other:</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

**Name and Residential Address**

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Suffix:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Also known as:</td>
<td>Date of birth: MM/DD/YYYY</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Line 1:</th>
<th>Address Line 2:</th>
<th></th>
</tr>
</thead>
</table>

| Address Line 3: | City: | State: | Zip Code: | |
| --- | --- | --- | --- |

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax:</th>
<th>Email:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Partner Type:</th>
<th>Percentage of ownership:</th>
<th>Partnership participation from: MM/DD/YYYY</th>
<th>Description of participation in operation of applicant:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>□ General/Full Partner</th>
<th>□ Limited Partner</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>□ Dormant/Silent Partner</th>
<th>□ Other:</th>
</tr>
</thead>
</table>

**Name and Residential Address**

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Suffix:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Also known as:</td>
<td>Date of birth: MM/DD/YYYY</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address Line 1:</th>
<th>Address Line 2:</th>
<th></th>
</tr>
</thead>
</table>

| Address Line 3: | City: | State: | Zip Code: | |
| --- | --- | --- | --- |

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax:</th>
<th>Email:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Partner Type:</th>
<th>Percentage of ownership:</th>
<th>Partnership participation from: MM/DD/YYYY</th>
<th>Description of participation in operation of the applicant:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>□ General/Full Partner</th>
<th>□ Limited Partner</th>
<th>□ Dormant/Silent Partner</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>□ Other:</th>
<th></th>
<th></th>
</tr>
</thead>
</table>
C. OTHER PERSONS HOLDING AN INTEREST IN THE PROPOSED SITE OR FACILITY

List any other persons holding an interest in the proposed site or facility, that are otherwise not disclosed in sections A or B.
Pennsylvania Department of Health
Medical Marijuana Grower/Processor Permit Application

<table>
<thead>
<tr>
<th>Occupation:</th>
<th>Title in the applicant’s business:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Also known as:</td>
<td>Date of birth: MM/DD/YYYY</td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City: State: Zip Code:</td>
</tr>
<tr>
<td>Phone: Fax: Email:</td>
<td></td>
</tr>
</tbody>
</table>

Nature, type, terms and conditions of the interest in the applicant:

---

Name and Residential Address

<table>
<thead>
<tr>
<th>First Name:</th>
<th>Middle Name:</th>
<th>Last Name:</th>
<th>Suffix:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td>Title in the applicant’s business:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Also known as:</td>
<td>Date of birth: MM/DD/YYYY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address Line 3:</td>
<td>City: State: Zip Code:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone: Fax: Email:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nature, type, terms and conditions of the interest in the applicant:

---

IF MORE SPACE IS REQUIRED, PLEASE SUBMIT ADDITIONAL INFORMATION ON OTHER PERSONS HOLDING AN INTEREST IN THE PROPOSED SITE OR FACILITY IN A SEPARATE DOCUMENT TITLED “OTHER PERSONS HOLDING AN INTEREST IN THE PROPOSED SITE OR FACILITY (CONTD.)” IN ACCORDANCE WITH THE ATTACHMENT FILE NAME FORMAT REQUIREMENTS AND INCLUDE IT WITH THE ATTACHMENTS.

SECTION 27 – CAPITAL REQUIREMENTS

PROVIDE A SUMMARY OF YOUR AVAILABLE CAPITAL AND AN ESTIMATED SPENDING PLAN TO BE USED FOR YOU TO BECOME OPERATIONAL WITHIN SIX MONTHS FROM THE DATE OF THE ISSUANCE OF THE PERMIT.
Part F – Community Impact
(Scoring Method: 100 Points)

SECTION 28 – COMMUNITY IMPACT

PLEASE BE ADVISED, LETTERS OF RECOMMENDATION OR SUPPORT WILL NOT BE CONSIDERED WHEN EVALUATING THIS SECTION.

PROVIDE A SUMMARY OF HOW THE APPLICANT INTENDS TO HAVE A POSITIVE IMPACT ON THE COMMUNITY WHERE ITS OPERATIONS ARE PROPOSED TO BE LOCATED:
TABLE OF CONTENTS

I. REGIONAL JOB CREATION AND ECONOMIC DEVELOPMENT .................. 4
II. FINANCIAL SUPPORT AND VOLUNTEERISM ........................................... 8
III. ONGOING PATIENT AND PHYSICIAN EDUCATION .............................. 13
IV. PHILANTHROPIC SUPPORT BY GTI'S FOUNDING MEMBERS .............. 21
IV. PHILANTHROPIC SUPPORT BY GTI’S FOUNDING MEMBERS
Attachment A: Signature Page

Instructions:
This attachment is the signature page for your application and all other attachments.
- Please review the application
- By checking the appropriate boxes, indicate the sections that are included in your submission
- Print this attachment
- Sign the document (primary contact or registered agent)
- Scan this sheet and save it as a file called “Attachment A,” using the appropriate file name format

By checking “Yes,” you acknowledge that you have read the Medical Marijuana Organization Permit Application Instructions before completing an application for a medical marijuana organization permit.

The applicant hereby submits this application for a Medical Marijuana Organization Permit to the Pennsylvania Department of Health, which consists of the completed application parts and attachments listed below:

FEES:
- Initial Application Fee
- Initial Permit Fee

APPLICATION:
- Completed Application

OTHER ATTACHMENTS:
- Attachment B: Organizational Documents
- Attachment C: Property Title, Lease, or Option to Acquire Property Location
- Attachment D: Site and Facility Plan
- Attachment E: Personal Identification
- Attachment F: Affidavit of Business History
- Attachment G: Affidavit of Criminal Offense
- Attachment H: Tax Clearance Certificates
- Attachment I: Affidavit of Capital Sufficiency
- Attachment J: Sample Medical Marijuana Product Label
- Attachment K: Release Authorization
- Attachment L: Applicant Priorities for Multiple Applications

BACKGROUND CHECKS:
- The applicant has requested background checks, as described in the instructions.
A false statement made in this application is punishable under the applicable provisions of 18 Pa. C.S. Ch. 49 (relating to falsification and intimidation).

_________________________  ________________________________  2/23/2017
Signature                  Director and CEO                        Date
Peter Kadens               Title in Applicant’s Business

A false statement made in this application is punishable under the applicable provisions of 18 Pa. C.S. Ch. 49 (relating to falsification and intimidation).

_________________________  ________________________________
Signature                  Title in Applicant’s Business

Printed Name

A false statement made in this application is punishable under the applicable provisions of 18 Pa. C.S. Ch. 49 (relating to falsification and intimidation).

_________________________  ________________________________
Signature                  Title in Applicant’s Business

Printed Name

A photocopy, facsimile or other electronic version of this document shall be accepted as an original signature.
## ATTACHMENT A
### TABLE OF CONTENTS

**SECTION 3: DIVERSITY**

- LETTER OF SUPPORT- AFRICAN AMERICAN CHAMBER OF COMMERCE .......................................................... 1

**SECTION 10: SECURITY**

- SECURITAS PLAN .......................................................................................................................... 3
- VISITOR LOG .............................................................................................................................. 19

**SECTION 14C: INVENTORY** ........................................................................................................... 20

- PROCESS FLOW DIAGRAM ........................................................................................................ 20

**SECTION 17B: PESTICIDES** ......................................................................................................... 21

- IPM PEST SCOUTING TECHNIQUES .......................................................................................... 21
- INTEGRATED PEST MANAGEMENT PLAN (IPM) ............................................................................ 22
  - Common Threats and Diseases ............................................................................................... 22
- PESTICIDE USE AND SPRAY SOPs .......................................................................................... 29
- PESTICIDE APPLICATION DOCUMENTATION ......................................................................... 31
- IPM PROGRAM .......................................................................................................................... 32
- PESTICIDE SPRAY LOG ............................................................................................................ 35
- PRODUCT LABELS, MATERIAL SAFETY DATA SHEETS, AND OMRI CERTIFICATES ................. 36
  - AZAMAX ................................................................................................................................. 36
  - AZATROL ................................................................................................................................. 48
  - PM WASH ............................................................................................................................... 57
  - NEEM OIL .............................................................................................................................. 60
  - SAFER SOAP ........................................................................................................................ 65
  - GARLIC BARRIER .................................................................................................................. 73
  - HYDROGEN PEROXIDE ........................................................................................................ 79
  - GRANDEVOS ........................................................................................................................... 85
  - PYGANIC .................................................................................................................................. 105
  - TRILOGY .................................................................................................................................. 121
  - ZEROTOL .................................................................................................................................. 131
  - CEASE ...................................................................................................................................... 140
  - DOUBLE NICKEL ..................................................................................................................... 157
  - ALL SEASONS MINERAL OIL ............................................................................................... 166
  - NEEMIX .................................................................................................................................... 171
  - FOSPHITE .................................................................................................................................. 178
  - CAPTIVA .................................................................................................................................... 188
  - NUKE EM ................................................................................................................................. 203

**SECTION 17C: CULTIVATION** ....................................................................................................... 206

- LOW STRESS TECHNIQUES- PRUNING ....................................................................................... 206
- CGMP EQUIPMENT LOG ............................................................................................................. 208

**SECTION 19: PROCESSING** ........................................................................................................ 209

- LETTER OF SUPPORT- MARY’S MEDICINALS .......................................................................... 209

**SECTION 27: CAPITAL REQUIREMENTS** .................................................................................. 210

- FINANCIAL STATEMENTS .......................................................................................................... 210
- BANK STATEMENT ..................................................................................................................... 216
- SUBSCRIPTION DOCUMENTS .................................................................................................... 217
- LINE OF CREDIT .......................................................................................................................... 219
EXECUTED WAGMAN CONTRACT .................................................................................................................. 220

SECTION 28: COMMUNITY IMPACT .............................................................................................................. 277

LETTER OF SUPPORT - GAUDENZIA FOUNDATION ......................................................................................... 277
CME APPLICATION ........................................................................................................................................ 279
DR. UPADHYAY MEDICAL RESEARCH ........................................................................................................ 284
MEDICAL ADVISORY BOARD CVs .................................................................................................................. 287
COMMUNITY ADVISORY BOARD BIOS ........................................................................................................ 323
LETTERS OF SUPPORT – MONTOUR COUNTY ............................................................................................. 337
EMPLOYEE INDUCTION PACKET .................................................................................................................... 353
January 25, 2017

Dear GTI Pennsylvania LLC,

On behalf of the Board of Directors of the African American Chamber of Commerce of Central Pennsylvania, we thank you for becoming a "Partner" level member. Your membership represents excellence and your commitment to do business in the Commonwealth. As a "Partner" level member of AACCP we look to you to help us educate and apprise our members of the many jobs and potential business opportunities in the fast-growing medical cannabis industry. AACCP looks forward to helping GTI formulate and implement a diversity plan to help achieve their internal diversity goals.

AACCP is the premier provider of business Resources, Networking, Advocacy, and Education for minority and disadvantaged business. The Chamber staff, corporate partners, government entities and supporters work together to create growth opportunities for the business community and to improve the quality of life in our city. As part of our mission, AACCP will assist GTI to identify businesses to work with in the minority community.

This year (2017), as a "Partner" Level member, AACCP has agreed to support the following initiatives:

- Meet regularly with GTI to develop and implement a diversity plan.
- Help GTI identify certified businesses with which to contract for services.
- Help develop mentoring, training, and professional development programs to maximize the participation and success of African Americans at GTI.
- AACCP will plan and implement an educational fair to be held in February 2017. The fair will outline the potential job opportunities throughout the Commonwealth and at GTI's proposed new cultivation center in Harrisburg. AACCP will become a referral source to generate qualified candidates for all levels of employment within GTI's Pennsylvania operations.
- This year (2017) GTI will be a Keynote speaker at an event positioned to encourage entrepreneurship.

African American Chamber of Commerce of Central Pennsylvania
P.O. Box 565
Harrisburg, PA 17108
On behalf of the AACCCP and its Board of Directors, we welcome you and thank you for support. We recognize and appreciate that GTI is making a long-term commitment to making the diversity of its company match that of our community.

Cordially,

[Signature]

I. Shariah Brown, Chair, AACCCP
## Visitor Log

<table>
<thead>
<tr>
<th>Date</th>
<th>Badge Number</th>
<th>Name</th>
<th>Arrival Time</th>
<th>Purpose of Visit</th>
<th>Area Visited</th>
<th>Name of Employee(s) visited</th>
<th>Departure Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each entry in the visitor log will include the full name of the visitor, the visitor identification badge number, time of arrival, the time of departure and purpose of the visit, including areas visited and the name of each employee visited. No compensation will be allowed or received by a principal, financial backer, operator or employee of the dispensary for allowing a visitor to enter a limited access area.
An Optional Premises Cultivation Operation that applies any Pesticide or other agricultural chemical to any portion of a Medical Marijuana plant, water or feed used during cultivation or generally within the Licensed Premises must document, and maintain a record on its Licensed Premises of, the following information:

a. The name, signature and Occupational License number of the individual who applied the Pesticide or other agricultural chemical;

b. Applicator certification number if the applicator is licensed through the Department of Agriculture in accordance with the “Pesticides Applicators’ Act,” sections 35-10-101 et seq., C.R.S.

c. The date and time of the application;

d. The EPA registration number of the Pesticide or CAS number of any other agricultural chemical(s) applied;

e. Any of the active ingredients of the Pesticide or other agricultural chemical(s) applied;

f. Brand name and product name of the Pesticide or other agricultural chemical(s) applied;

g. The restricted entry interval from the product label of any Pesticide or other agricultural chemical(s) applied;

h. The RFID tag number of the Medical Marijuana plant(s) that the Pesticide or other agricultural chemical(s) was applied to or if applied to all plants throughout the Licensed Premises, a statement to that effect; and

i. The total amount of each Pesticide or other agricultural chemical applied.
# IPM Program

## Grandevo 10ml/gal
- C1
- C2
- C3 DIP ROOTS 15ml/gal
- V1 diluted light mist
- V2 drench @ potting
- V3 X
- V4 drench @ repotting
- V5
- V6

## Fosphite 10-15ml/gal

## Pyganic 10ml/gal

## Neemix 2ml/gal

<table>
<thead>
<tr>
<th></th>
<th>Grandevo 10ml/gal</th>
<th>Fosphite 10-15ml/gal</th>
<th>Pyganic 10ml/gal</th>
<th>Neemix 2ml/gal</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Nuke Em 100ml/gal

## Double Nickel 40ml/gal

## Cease 25ml/gal

## Neemix 2ml/gal

<table>
<thead>
<tr>
<th></th>
<th>Nuke Em 100ml/gal</th>
<th>Double Nickel 40ml/gal</th>
<th>Cease 25ml/gal</th>
<th>Neemix 2ml/gal</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>F2</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPM Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trilogy 30ml/gal &amp; Stylet oil 40ml/gal</th>
<th>Pyganic 10ml/gal</th>
<th>Zero Tol 40ml/gal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>Component/Function</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Grandevo</td>
<td>Chromobacterium <em>subtsugae</em></td>
<td></td>
</tr>
<tr>
<td>Fosphite</td>
<td>Mono and dipotassium salts in phosphorous acid</td>
<td></td>
</tr>
<tr>
<td>Pyganic</td>
<td>Pyrethrins</td>
<td></td>
</tr>
<tr>
<td>Neemix</td>
<td>Azadirachtin</td>
<td></td>
</tr>
<tr>
<td>Trilogy</td>
<td>Clarified Hydrophobic Extract of Neem Oil</td>
<td></td>
</tr>
<tr>
<td>Nuke Em</td>
<td>Potassium Sorbate</td>
<td></td>
</tr>
<tr>
<td>Double Nickel</td>
<td><em>Bacillus amyloliquefaciens</em></td>
<td></td>
</tr>
<tr>
<td>Cease</td>
<td><em>Bacillus subtilis</em></td>
<td></td>
</tr>
<tr>
<td>Zero Tol</td>
<td>Hydrogen Dioxide &amp; Peroxyacetic Acid</td>
<td></td>
</tr>
<tr>
<td>Stylet Oil</td>
<td>Paraffinic oil</td>
<td></td>
</tr>
</tbody>
</table>
AzaMax®

Botanical Insecticide, Miticide, and Nematicide

ACTIVE INGREDIENT % by Wt.
Azadirachtin 1.2%
OTHER INGREDIENTS 98.8%
TOTAL 100.0%

Contains 0.35 grams azadirachtin per fluid ounce.

KEEP OUT OF REACH OF CHILDREN
CAUTION
READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

REPELLENT, ANTIFEEDANT AND INSECT GROWTH REGULATOR (IGR)
INDOOR AND OUTDOOR ORNAMENTAL FLOWERS, TREES, SHRUBS, VEGETABLES, FRUIT AND NUT TREES, PLANTS, INCLUDING PLANTS GROWN IN CONTAINERS, RECIRCULATORY, AEROPONIC, AND HYDROPONIC SYSTEMS, INTERIORSCAPES, HOME, AND GARDEN.

EPA Reg. No. 71908-1-81268
EPA Est. No. 80876-OK-001
EPA Est. No. 71908-IND-001
Batch No.: XXX

NET CONTENTS: 0.084 fl. oz., 2 fl. oz., 4 fl. oz., 8 fl. oz., 16 fl. oz., 32 fl. oz. or 128 fl. oz.

FOR ORGANIC PRODUCTION
AzaMax®
Botanical Insecticide, Miticide, and Nematicide

REPELLENT, ANTI FEEDANT AND INSECT GROWTH REGULATOR (IGR)
INDOOR AND OUTDOOR ORNAMENTAL FLOWERS, TREES, SHRUBS, VEGETABLES, FRUIT AND NUT TREES, PLANTS, INCLUDING PLANTS GROWN IN CONTAINERS, RECIRCULATORY, AEROPONIC, AND HYDROPONIC SYSTEMS, INTERIORSCAPES, HOME, AND GARDEN.

See the Directions for Use for Complete List of Insects Controlled.

ACTIVE INGREDIENT: % By Wt.
Azadirachtin .............................................. 1.2%
OTHER INGREDIENTS .............................. 98.8%
TOTAL 100.0%

Contains 0.35 grams azadirachtin per fluid ounce.

FOR ORGANIC PRODUCTION

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID
If inhaled Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call poison control center or doctor for further treatment advice.

If on skin or clothing Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If in eyes Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

If swallowed Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

For emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time. During other times, call the poison control center 1-800-222-1222.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION - Harmful if absorbed through skin or if inhaled. Avoid breathing vapor. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Wear chemical resistant gloves.

Personal Protective Equipment (PPE)
Applicators and handlers must wear:
• Long-sleeved shirt
• Long pants
• Socks and shoes
• Chemical resistant gloves

Follow the manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENVIRONMENTAL HAZARDS
This pesticide is toxic to fish and aquatic invertebrates.
For Terrestrial Uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwater or rinsate.

USER SAFETY RECOMMENDATIONS
Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
Users should remove clothing/PPE immediately if product gets inside. Then wash thoroughly and put on clean clothing.
Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

DIRECTIONS FOR USE
It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protect handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Do not apply this product through any type of irrigation system.

Agricultural Use Requirements
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural products. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment (PPE), notification to workers and restricted entry interval. The requirements in this box apply to the uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow any worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, water, wear coveralls, chemical resistant gloves, shoes plus socks and protective eyewear.

MODE OF ACTION:
AzaMax® Botanical Insecticide, Miticide, and Nematicide controls target pests on contact or by ingestion. The product acts on pests by way of repellence, anti-feedance, and interference with the molting process.

Azadirachtin, an insect growth regulator (IGR), mimics the pests’ hormones and disrupts distinct stages of growth and development of insects and mites. The primary mode of action of azadirachtin is an interference with synthesis and metabolism of ecdysone and the juvenile hormone. Ecdysone is the molting hormone of insects, and azadirachtin can regulate growth leading to death before or during molting.

AzaMax® will provide control results comparable to the synthetic insecticide standards. AzaMax® provides broad spectrum control with very low environmental impact. AzaMax® provides all the benefits of azadirachtin, a proven anti-feedant, insect growth regulator (IGR), anti-ovipository, and repellent, as well as a toxin to soft bodied insect larvae.

The active ingredient in AzaMax® - Azadirachtin – is a unique botanical insecticide, miticide and nematicide.
Mode of Action:
Control of different orders of insects or insects in different phases of their life cycle is due to the complexity of the azadirachitin molecule and the many modes of action inherent in azadirachitin.

| Anti-Feedant | Insects feed less or not at all on treated plants. Foliage is not damaged and insects ultimately starve to death. |
| Insect Growth Regulator (IGR) | Insects fail to mature and reproduce, eliminating populations over time. |
| Anti-ovipository | Insects do not lay eggs on treated plants. The likelihood of insect infestation is greatly decreased in treated plants. This adds a preventive aspect to your insect control. |
| Repellant | Insects do not prefer treated plants. |

PESTS CONTROLLED OR SUPPRESSED
Use AzaMax® against the following pests.

TARGET PEST SPECIES OF AzaMax®

| HEMIPTERA AND HOMOPTERA | including but not limited to: true bugs including boxelder bugs, chinch bugs, lygus bugs and stink bug; lacebugs; leafhoppers including grape leafhopper, spittlebug, potato leafhopper and variegated leafhopper; mealy bugs including apple mealy bugs, citrus mealy bugs, grape mealy bugs; whiteflies including greenhouse whitefly, silverleaf whitefly and sweet potato whitefly and woolly whitefly; psyllids including pear psyllids and scales including black scale, brown soft scale, California red scale, coffee scale, olive scale, San Jose scale, and cottony cushion scale. |
| LEPIDOPTERA | including but not limited to: moths including European pine shoot moth, pine tip moth and Tussock moth; leafrollers including blueberry leafroller, filbert leafroller, fruit tree leafroller, citrus leaffminers, grape leafroller, oblique banded leafroller, ornate leafroller; cutworms including black cutworm and citrus cutworm; caterpillars and loopers including bagworms, budworms, cabbage looper, canker worms, case bearers, casemakers, corn earworm, diamondback moth, foul worms, grape leaf skeletonizer, gypsy moth, hornworms, imported cabbageworm, navel orangeworm, soybean looper, spruce budworm, tent caterpillar, tip moths, tobacco budworm, tobacco hornworm, tomato pinworm and tussock moth; armyworms including beet armyworm, fall armyworm, lawn armyworm, southern armyworm and yellow striped armyworm; webworms and leaf perforators. |
| COLEOPTERA | including but not limited to: beetles, grubs and weevils including Asian long-horned beetle, bark beetles, black vine weevil, Colorado potato beetle, elm bark beetle, European chafer, flea beetles, Japanese beetle, June beetle, leaf beetles, Mexican bean beetle, Northern masked chafer, rose chafers and Southern masked chafer and twig girders. |
| DIPTERA | including but not limited to: flies including Caribbean fruit fly, cherry maggots, crane fly, fungus gnats, Hessian fly, Oriental fruit fly, Mediterranean fruit fly, marsh crane flies, melon fly, shore fly and walnut husk fly; leafminers including citrus leafminers and serpentine leafminers. *Not intended for use on public health pests. |
| THYSANOPTERA | including but not limited to: thrips including citrus thrips, flower thrips, gladiolus thrips, onion thrips, thrips palmi and Western flower thrips. |
| ACARINA | including but not limited to: mites, red spider mites, brown mite, clover mite, conifer spider mite, European red mite, spruce spider mite, and two-spotted spider mite. *Not intended for use on public health pests. |

TARGET PEST SPECIES OF AzaMax® (cont.)

| ORTHOPTERA | including but not limited to: crickets; grasshoppers; locusts |
| HYMENOPTERA | including but not limited to: sawflies including European sawflies, pear sawflies, red-headed pine sawflies, yellow-headed pin sawflies. |

NEMATODA
Nematodes (suppression)

FOR USE ON ORNAMENTALS AND LANDSCAPE PLANTINGS

Ornamental Plants and Flowers including but not limited to:

- Actinopusis, African violets*;
- ageratum, aglaonema, Algerian ivy, allamanda, alocasia, amaranthus, anthurium, aphelandra, arborvitea, Artemisia, aster, aucuba ilex, azalea, baby’s breath, begonia, Boston fern, bougainvillea, boxwood, brachycome, cacti, calabrese, caladium, calathea, calendula, calla, camellia, carnation, ceanothus, chrysanthemum, cineraria, coleus, columbine, cotoneaster, cycamen, daffodil, dahila, daisy, daylily, delphinium, dianthus, dieffenbachia, dogwood, dusty miller, Easter lily, English ivy, euphorbia, fern, ficus, foliage plants, foxglove, freesia, fuschia, gailiardia, gardenia, geranium, gerbera, gliola, glomina, gypsophilla, hederia, hibiscus, hyacinth, hydrangea, ilex, impatients, iris, ivy, jasmine, lilac, lily, maidenhair fern, mandevilla, marigold, narcissus, nasturtium, orchid*, pansy, pelargonium, peony, peperomia, petunia, philodendron, phlox, photinia, pinks, pittoспорum, poinsettia*, pothos, portulaca, primrose, pyracantha, rhododendron, rose*, rosemary, rubber plant, salvia, schefflera, sedum, sempervivum, snapdragon, spathiphyllum, stock, syngonium, tulip, verbena, vinca, wandering jess, yucca, zinnia

*Please note that when making applications to these species, spotting of plant foliage and blossoms is possible.
FOR USE ON ORNAMENTALS AND LANDSCAPE PLANTINGS (cont.)

| Ornamental Trees and Shrubs including but not limited to: | Andromeda, arborvitae, ash, Austrian pine, azalea, beech, birch, birds nest spruce, blue spruce, bougainvillea, boxwood, butternut, cedar, charmaecyparis, cherry, coteaster, crabapple, cypress, dogwood, Douglas fir, elm, euonymus, firethorn, forsythia, hackberry, hawthorn, hemlock, hickory, holy, honey locust, horse chestnut, juniper, larch, laurel, lilac, linden, London planetree, magnolia, mandevilla, maple, mimosa, mountain ash, myrtle, oak, pachysandra, peach, photinia, pine, planteree, poplar, privet, purple leaf winter creeper, quince, sage, spruce, sycamore, white cedar, white pine, yew |

Waxy bloom on certain ornamental plants will be reduced after an application. Applications will remove the glaucus 'blue' coloring from evergreens such as Colorado blue spruce and Koster spruce.

FOR USE ON GARDEN CROPS, VEGETABLES, HERBS, SPICES, FRUITS AND BERRIES

| Leafy Vegetables including but not limited to: | Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Endive, Kale, Lettuce, Spinach |
| Root Vegetables including but not limited to: | Beet, Carrot, Horseradish, Parsnip, Potato, Radish, Sweet potato, Turnip, Yams |
| Fruiting Vegetables including but not limited to: | Eggplant, Pepper, Tomato, Tomato |
| Cucurbit Vegetables including but not limited to: | Cucumber, Gourd (edible), Muskemelon, Pumpkin, Squash, Watermelon, including Cantaloupe, Casaba, Gherkins, Melons (including hybrids), Zucchini |
| Legume Vegetables including but not limited to: | Bean, Chickpea, Lentil, Pea |
| Bulb Vegetables including but not limited to: | Garlic, Onion, Shallot |
| Berries including but not limited to: | Blackberry, Blueberry, Raspberry, Strawberry, others include: Boysenberry, Currants, Dewberry, Elderberry, Gooseberry, Loganberry |
| Herbs and Spices including but not limited to: | Chive, Dill, Fennel, Mustard, Sage, Sweet bay, others include: Anise, Balm, Basil, Black pepper, Borage, Caraway, Cumin, Chamomile, Coriander, Cumin, Curry leaf, Dandelion, Fenugreek, Horehound, Hyssop, Marjoram, Marigold, Mint, Nasturtium, Pennroyal, Peppermint, Rosemary, Savory, Spearmint, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood |
| Nut Trees including but not limited to: | Almond, Brazil nut, Filbert, Hickory nut, Pecan, Pistachios, Walnut |
| Pome Fruits including but not limited to: | Apple, Quince, or Pear (Comice varieties: DO NOT apply more than 24 fl oz/A. DO NOT apply after pink stage of flowering; test small areas of other varieties of pears for plant safety prior to full scale usage.) |

(for cont. on next column)

AzaMax® has been evaluated for phytotoxicity on a wide range of ornamentals and garden plants. However, since testing on all plant varieties is not feasible, test a small portion of the area to be treated for phytotoxicity before treating the entire area.

There are no restrictions on applying AzaMax® up to the time of harvest.

SPRAY PREPARATION

AzaMax® is an emulsifiable concentrate to be diluted with water. This product forms an emulsion and will separate upon extended standing. Re-agitate to assure uniformity of the spray mixture.

Prepare only the volume needed for the intended application, and use the spray mixture within 24 hours of preparation.

TANK MIXTURES

AzaMax® is an emulsifiable concentrate and is compatible with commonly used pesticides and fertilizers. Always check the physical compatibility using a jar test in the correct proportions if needed.

If a broader spectrum of control is required tank-mix AzaMax® with insecticides or miticides. If a rapid knockdown of heavy populations is necessary, then include an effective contact insecticide/miticide in combination with AzaMax®.

Always read and follow the directions for use, precautions and limitations for use on all product labels used in combination. Applications must follow the precautions and limitations of the most restrictive product label in the mixture. Do not exceed the dosage rates of any product.

Select the right companion products:

IPM uses a variety of control options including biological, chemical, and cultural practices. AzaMax® is botanical with growth regulator action on insects and mites. Companion products include pyrethroids, spinosyns, microbial toxins, and chloronicotinyls that complement azadirachtin. Formulations of bifenthrin, spinosad, abamectin, and imidaclopid are effective for different pests. Select the product that has been proven to provide adequate performance for the pests you are trying to control.

Physical Incompatibility

Do not use AzaMax® with Captan, Bordeaux mixture, triphenyltin hydroxide, lime sulfur, Rayplex iron or other highly alkaline materials as they can cause phytotoxicity and/or reduced efficacy on some target pests. Phytotoxicity will occur if tank-mix combinations with compounds known to be incompatible with oil-based formulations are used.

APPLICATION EQUIPMENT

AzaMax® with hand-operated (manual) or power spray equipment suitable for low volume and/or high volume applications. Follow the recommendations of the equipment manufacturer when using backpack sprayers, hose-end sprayers, compression (pump-up) sprayers, and other sprayers suitable for foliar applications of insecticides.

APPLICATION SCHEDULE

For the most effective control, apply AzaMax® when pests are expected to appear or as soon as possible after pests appear and are in immature stages. Spray at an interval of seven (7) to ten (10) days or as the situation warrants.

During high pest infestation levels or when canopy is dense, use higher dosage (use) rates and increase the spray frequency. For best results, spray in the morning or evening hours. Repeat spraying if rain occurs within two to three hours of spraying. For additional guidance, consult your state agricultural experiment station or local extension horticulturist/arborist for information on tactics and windows of application.
APPLICATION METHODS

Apply AzaMax® as directed to any food or non-food crop up to and including the day of harvest, at a maximum rate of 1.33 fl. oz. per 1,000 sq. ft. per application.

Dilute AzaMax® with water at a rate of 0.5 - 4.0 tablespoons (Tbs) per gallon of water. For hose end sprayers, set the RATE PER GALLON at the dial setting of 1 to 4 Tbs. depending on the crop and pests. Use the lower RATE PER GALLON for low to moderate infestations and use the higher specified RATE PER GALLON for severe infestations.

FOLIAR APPLICATION

<table>
<thead>
<tr>
<th>USE</th>
<th>SPRAY CONCENTRATION %</th>
<th>Amounts of AzaMax®</th>
<th>Amounts of AzaMax®</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Fluid Ounces (Tbs.) Per Quart</td>
<td>Fluid Ounces (Tbs.) Per Gallon</td>
</tr>
<tr>
<td>Including trees, shrubs, flowers, conifers, evergreens, herbaceous ornamentals, foliage plants, container-grown ornamentals &amp; garden plants and groundcovers</td>
<td>Lower rate ranges of 0.25 - 0.75 vol/vol:</td>
<td>0.08 – 0.25 fl. oz. (1/6 – 1/2 Tbs.)</td>
<td>(2.4 – 7.4 ml)</td>
</tr>
<tr>
<td></td>
<td>Medium rate ranges of 0.75 - 1.25 vol/vol:</td>
<td>0.25 – 0.40 fl. oz. (1/2 – 5/6 Tbs.)</td>
<td>(7.4 – 11.8 ml)</td>
</tr>
<tr>
<td></td>
<td>Upper rate ranges of 1.25 - 1.70 vol/vol:</td>
<td>0.40 – 0.50 fl. oz. (5/6 – 1.0 Tbs.)</td>
<td>(11.8 – 14.8 ml)</td>
</tr>
</tbody>
</table>

DRENCH APPLICATION

Use AzaMax® as a soil drench for effective control of soil-borne insect larvae, including soil-borne larvae of foliar pests, such as fungus gnats, nematodes, or soil borne thrips. When applying as a drench, avoid excessive leaching.

Preventive applications as a soil drench may be warranted for certain pests. Soil drench applications of azadirachtin will have a slower rate of activity because of soil absorption when compared to foliar applications of AzaMax®. Target the initial application of a soil drench treatment to coincide with the early stages of young larvae and young nymphs.

Dilute AzaMax® with water for concentrations of 0.4 to 0.8% volume/volume. See use rate table below. Add the required amount of AzaMax® to a clean bucket with at least one-half of the water to be drenched. Agitate the mixture thoroughly and then fill with the remaining water and continue agitation until the product is thoroughly dispersed.

Drench the soil in the pot with one (1) pint of finished product dilution per 1.0 gallon of soil. For fungus gnats, use the 0.4% spray concentration. For mushroom fly maggot control, use the 0.6% volume/volume spray concentration. For leafminers and other difficult to control pests, use the 0.8% volume/volume spray concentration.

DILUTION TABLE FOR DRENCH APPLICATIONS

<table>
<thead>
<tr>
<th>Gallons of Water</th>
<th>Amount of AzaMax®</th>
<th>Application Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.4%</td>
<td>0.6%</td>
</tr>
<tr>
<td>1 gallon</td>
<td>1 Tbs.</td>
<td>1.5 Tbs.</td>
</tr>
<tr>
<td></td>
<td>0.5 fl. oz. (14.8 ml)</td>
<td>0.8 fl. oz. (23.7 ml)</td>
</tr>
<tr>
<td>5 gallons</td>
<td>2.5 fl. oz. (74.0 ml)</td>
<td>4.0 fl. oz. (118.3 ml)</td>
</tr>
<tr>
<td>10 gallons</td>
<td>5.0 fl. oz. (148.0 ml)</td>
<td>8.0 fl. oz. (236.6 ml)</td>
</tr>
</tbody>
</table>

RECIIRCULATORY, AEROPONIC, AND HYDROPONIC APPLICATION

Use AzaMax® in recirculatory, aeroponic, or hydroponic systems for the control of foliar pests, soil borne insect larvae, including soil borne larvae of foliar pests such as fungus gnats, nematodes or soil borne thrips for interiorscapes, hydroponic, aeroponic and container plants.

Dilute AzaMax® with water for concentrations of 0.1% to 0.8% volume/volume in a recirculatory or in a hydroponic liquid system. See use rate table below. Agitate the mixture thoroughly until the product is thoroughly dispersed.

For fungus gnats, use the 0.6% volume/volume concentration. For mushroom fly maggot control, use the 0.6% volume/volume concentration. For leafminers and other difficult to control pests, use the 0.8% volume/volume concentration. Make two to three (2 – 3) applications at 10 –14 day intervals until pest pressure has ended. With high insect pressure make applications every 5 to 6 days. Additional applications of AzaMax® may be required with increased and prolonged pest infestation.

DILUTION TABLE FOR RECIIRCULATORY, AEROPONIC, AND HYDROPONIC APPLICATIONS

<table>
<thead>
<tr>
<th>Gallons of Water</th>
<th>0.1%</th>
<th>0.2%</th>
<th>0.4%</th>
<th>0.6%</th>
<th>0.8%</th>
<th>Application Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gallon</td>
<td>¼ Tbs.</td>
<td>½ Tbs.</td>
<td>1 Tbs.</td>
<td>1.5 Tbs.</td>
<td>2.0 Tbs.</td>
<td>7 - 14 days</td>
</tr>
<tr>
<td>1 gallon</td>
<td>0.14 fl. oz. (4.1 ml)</td>
<td>0.25 fl. oz. (7.4 ml)</td>
<td>0.5 fl. oz. (14.8 ml)</td>
<td>0.8 fl. oz. (23.7 ml)</td>
<td>1.0 fl. oz. (29.6 ml)</td>
<td>7 - 14 days</td>
</tr>
<tr>
<td>5 gallons</td>
<td>0.7 fl. oz. (20.7 ml)</td>
<td>1.3 fl. oz. (38.4 ml)</td>
<td>2.5 fl. oz. (74.0 ml)</td>
<td>4.0 fl. oz. (118.3 ml)</td>
<td>5.0 fl. oz. (148.0 ml)</td>
<td>7 - 14 days</td>
</tr>
<tr>
<td>10 gallons</td>
<td>1.4 fl. oz. (41.4 ml)</td>
<td>2.6 fl. oz. (77.0 ml)</td>
<td>5.0 fl. oz. (148.0 ml)</td>
<td>8.0 fl. oz. (236.6 ml)</td>
<td>10.0 fl. oz. (295.7 ml)</td>
<td>7 - 14 days</td>
</tr>
</tbody>
</table>

Preventive applications as a recirculatory system application may be warranted for certain pests.

AzaMax® can also be applied through sub-surface treatment equipment. Always follow manufacturer’s use directions.
STORAGE & DISPOSAL
Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store in original containers in a dry, cool, well-ventilated area.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill container ¼ full with water and recap. Shake 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times.

NOTICE ON CONDITIONS OF SALE
The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Plant injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of PARRY. All such risks shall be assumed by the user or buyer.

AzaMax® is a registered trademark of PARRY AMERICA INC. 3-2011
Mode of Action:
Control of different orders of insects or insects in different phases of their life cycles due to the complexity of the azadirachtin molecule and the many modes of action inherent in azadirachtin.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-feedant</td>
<td>Insects feed less or not at all on treated plants. Foliage is not damaged and insects ultimately starve to death.</td>
</tr>
<tr>
<td>Insect Growth Regulator (IGR)</td>
<td>Insects fail to mature and reproduce, eliminating populations over time.</td>
</tr>
<tr>
<td>Anti-ovipository</td>
<td>Insects do not lay eggs on treated plants. The likelihood of insect infestation is greatly decreased in treated plants. This adds a preventive aspect to your insect control.</td>
</tr>
<tr>
<td>Repellent</td>
<td>Insects do not prefer treated plants.</td>
</tr>
</tbody>
</table>

PESTS CONTROLLED OR SUPPRESSED

**HEMIPTERA AND HOMOPTERA** including but not limited to:
- true bugs including boxelder bugs, chinchi bugs, lygus bugs and stink bugs
- lacebugs; leafhoppers including grape leafhopper, spittlebug, potato leafhopper and variegated leafhopper; mealy bugs including apple mealy bugs, citrus mealy bugs, grape mealy bugs; whiteflies including greenhouse whitefly, silverleaf whitefly and sweet potato whitefly and wooly whitefly; aphids including potato aphid, green peach aphid, melon aphid, pea aphid, potato aphid and rose aphid; psyllids including pear psylla and scales including black scale, brown soft scale, California red scale, coffee scale, olive scale, San Jose scale, and cottony cushion scale.

**COLEOPTERA** including but not limited to:
- beetles; grubs and weevils including Asian long-horned beetle, bark beetles, black vine weevil, Colorado potato beetle, elm bark beetle, European chafer, flea beetles, Japanese beetle, June beetle, leaf beetles, Mexican bean beetle, Northern masked chafer, rose chafer, and Southern masked chafer and twig girders.

**THYSANOPTERA** including but not limited to:
- thrips including citrus thrips, flower thrips, gladiolus thrips, onion thrips, thrips palmi and Western flower thrips.

**LEPIDOPTERA** including but not limited to:
- moths including European pine shoot moth, pine tip moth and Tussock moth; leafrollers including blueberry leafroller, fable leafroller, fruittree leafroller, citrus leafminers, grape leafroller, oblique banded leafroller, orinuous leafroller; cutworms including black cutworm and cotton cutworm; caterpillars and looper including bagworms, budworms, cabbage looper, canker worms, case beaters, caseworms, corn earworm, diamondback moth, fruit worms, grapeleaf skeletonizer, gypsy moth, hornworms, imported cabbageworm, navel orangeworm, soybean looper, spruce budworm, tent caterpillar, tip moths, tobacco budworm, tobacco hornworm, tomato pinworm and tussock moth; armyworms including beet armyworm, fall armyworm, lawn armyworm, southern armyworm and yellow striped armyworm; webworms and leaf perforators.

**DIPTERA** including but not limited to:
- flies including Caribbean fruit fly, cherry maggot, cran fly, fungus gnat, Hessian fly, oriental fruit fly, Mediterranean fruit fly, marsh cranefly, melon fly, shore fly and walnut husk fly; leafminers including citrus leafminers and serpentine leafminers.
*Not intended for use on public health pests*

**HYMENOPTERA** including but not limited to:
- sawflies including European sawfly, pear sawfly, redheaded pine sawfly, yellowheaded pine sawfly.
*Not intended for use on public health pests*

**ORTHOPTERA** including but not limited to:
- crickets; grasshoppers; locusts.

(cont. on next page)
PESTS CONTROLLED OR SUPPRESSED (cont.)

<table>
<thead>
<tr>
<th>ACARINA including but not limited to:*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mites including, red spider mites, brown mite, clover mite, conifer spider mite, European red mite, spruce spider mite, and two-spotted spider mite.</td>
</tr>
</tbody>
</table>

*Not intended for use on public health pests

<table>
<thead>
<tr>
<th>NEMATODA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nematodes (suppression)</td>
</tr>
</tbody>
</table>

FOR USE ON FLOWERS, ORNAMENTALS AND LANDSCAPE PLANTINGS

<table>
<thead>
<tr>
<th>Ornamental Plants and Flowers including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actinopteris, African violets*, ageratum, aglaonema, Algerian ivy, allamanda, aloecasia, amaranthus, anthurium, aphelandra, arborvitae, Artemesia, aster, aucuba ilex, azalea, baby’s breath, begonia, Boston fern, bougainvillea, boxwood, brachycome, cacti, calaibre, caladium, catathea, calendula, calla, camellia, carnation, ceanothus, chrysanthemum, cineraria, coleus, columbine, cotoneaster, cyclamen, daffodil, dahila, daisy, daylily, delphinium, dianthus, diennenbachia, dogwood, dusty miller, Easter lily, English ivy, euphoria, fern, ficus, foliage plants, foxglove, freesia, fuschia, gaillardia, gardenia, geranium, gerbera, gladiola, gloxinia, gypsophilla, hedera, hibiscus, hyacinth, hydrangea, ilex, impatiens, iris, ivy, jasmine, lilac, lily, maidenhair fern, mandevilla, marigold, narcissus, nasturtium, orchid*, pansy, pelargonium, peony, peperomia, petunia, philodendron, phlox, photinia, pinks, pitostporum, poinsettia*, pothos, portulaca, primrose, pyracantha, rhododendron, rose*, rosemary, rubber plant, salvia, scervifera, sedum, sempervivum, snapdragon, spathiphyllum, stock, syngonium, tulip, verbena, vinca, wandering jew, yucca, zinnia.</td>
</tr>
</tbody>
</table>

*Please note that when making applications to these species, spotting of plant foliage and blossoms is possible.

<table>
<thead>
<tr>
<th>Leafy Vegetables including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Endive, Kale, Lettuce, Spinach</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Root Vegetables including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beet, Carrot, Horseradish, Parsnip, Potato, Radish, Sweet potato, Turnip, Yams</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fruiting Vegetables including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eggplant, Pepper, Tomatillo, Tomato</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cucurbib Vegetables including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucumber, Gourd (edible), Muskmelon, Pumpkin, Squash, Watermelon, including Cantaloupe, Casaba, Cherrkins, Melons (including hybrids), Zucchini</td>
</tr>
</tbody>
</table>

| Legume Vegetables including but not limited to: |
|-------------------------------------------------
| Bean, Chickpea, Lentil, Pea |

<table>
<thead>
<tr>
<th>Bulb Vegetables including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garlic, Onion, Shallot</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Berries including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackberry, Blueberry, Raspberry, Strawberry, others include: Boysenberry, Currants, Dewberry, Elderberry, Gooseberry, Loganberry</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Herbs and Spices including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chive, Dill, Fennel, Mustard, Sage, Sweet bay, others include: Anise, Balm, Basil, Black pepper, Borage, Caraway, Catnip, Chamomile, Coriander, Cumin, Curry leaf, Dandelion, Fenugreek, Horeshound, Hyssop, Marjoram, Marigold, Mint, Nasturtium, Pennyroyal, Peppermint, Rosemary, Savory, Spearmint, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nut Trees including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almond, Brazil nut, Filbert, Hickory nut, Pecan, Pistachios, Walnut</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pome Fruits including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple, Quince, or Pear (Comice varieties: DO NOT apply more than 24 fl oz/A. DO NOT apply after pink stage of flowering; test small areas of other varieties of pears for plant safety prior to full scale usage.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stone Fruits including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apricot, Cherry, Nectarine, Peach, Plum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Citrus Fruits including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grapefruit, Lemon, Lime, Orange others include: Citrus Citron, Mandarin (tangerine), Nectarine, Satsuma (orange mandarin), Tangerine</td>
</tr>
</tbody>
</table>

AzaMax® has been evaluated for phytotoxicity on a wide range of ornamentals and garden plants. However, since testing on all plant varieties is not feasible, test a small portion of the area to be treated for phytotoxicity before treating the entire area.

There are no restrictions on applying AzaMax® up to the time of harvest.

APPLICATION METHODS

AzaMax® is an emulsifiable concentrate to be diluted with water. The product forms an emulsion and requires agitation to assure uniformity of the spray mixture.

For Use on Flower, Ornamental, Garden, and Landscape Plantings

For Use on Garden Crops, Vegetables, Herbs, Spices, Fruits, and Berries
Instructions for Using Single Dose Sprayer System™
Single Dose Delivery Vial –
2.5 milliliters (0.084 fluid ounce or 1/8 Tbs.)

AzaMax® Single Dose Sprayer System*

- Remove access cap from Single Dose Sprayer bottle.
- Fill sprayer bottle with 16 ounces of tap water (see fill line on bottle).
- Open box that contains the Single Dose Delivery Vials.
- Remove a Single Dose Delivery Vial.
- Pour contents of the Vial into the sprayer bottle through the access opening. Replace access cap on the Single Dose Sprayer bottle.
- Shake sprayer bottle vigorously for 20 seconds or until product is thoroughly dispersed. Apply Product Spray Solution.

*Patent Pending – Single Dose Delivery Vials can be purchased separately.

For the most effective control, spray AzaMax® as soon as possible after pests appear and are in the immature stages. Spray at an interval of seven to ten days or as the situation warrants. During high pest infestation levels increase the spray frequency. Apply AzaMax® so as to thoroughly cover both sides of the foliage. Foliar applications offer locally systemic activity against insect pests. Repeat spraying if rain occurs within two to three hours of spraying. AzaMax® can be applied as directed to any food or non-food plant up to and including the day of harvest.

An application of AzaMax® does not provide the quick "knock-down" of a contact poison. Usage experience has shown that with three treatments over a period of 21 to 30 days (spray every 7 to 10 days), pest control is comparable to the synthetic insecticide "standards". If AzaMax® is used as a preventative treatment throughout the season, prior to insect infestation, the goal of protecting your plants will be accomplished. With high insect pressure applications should be made every 5 to 7 days. Additional applications of AzaMax® may be required with increased and prolonged pest infestation.

How to Use:

- Adjust nozzle to desired spray pattern.

HOW TO USE: (CONT.)

Spray leaves, stems, and tender new shoots. To obtain good insect & mite control, spray both upper & lower surface of leaves. Apply spray until leaves are evenly coated but not to run off.

Hold Sprayer about 12 inches from foliage.

The spray mixture should be used within 24 hours of preparation. Any un-used solution can be drenched over the base of the plants – please refer to the drench application section of this label.

DRENCH APPLICATION FOR INDOOR AND OUTDOOR PLANTS GROWN IN CONTAINERS

Use AzaMax® as a soil drench for effective control of soil-borne insect larvae, including soil-borne larvae of foliar pests, such as tungus gnats, hematoide, or soil-borne thrips. When applying as a drench, avoid excessive leaching.

Preventive applications as a soil drench may be warranted for certain pests. Soil drench applications of AzaMax® will have a slower rate of activity because of soil absorption when compared to foliar applications methods. Target the initial application of a soil drench treatment to coincide with the early stages of young larvae and young nymphs.

Drench the soil in the pot with one (1) pint of finished spray per 1.0 gallon of soil. Make two to three (2-3) applications at 10 to 14 day intervals until the pest pressure has ended.

STORAGE & DISPOSAL

PESTICIDE STORAGE:
Do not store this product above 105°F or below -15°F for extended periods of time. Keep containers tightly closed and in original containers when not in use. Store in original container in a cool, dry place, out of reach of children.

PESTICIDE DISPOSAL:
Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:
Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available.

NOTICE ON CONDITIONS OF SALE

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Plant injury, ineffective- ness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of PARRY. All such risks shall be assumed by the user or buyer.

AzaMax® is a registered trademark of PARRY AMERICA INC.

3-2011
Material Safety Data Sheet

Product Name: AzaMax™ Biological Insecticide, Miticide, and Nematicide

1. Product and Company Identification

AzaMax™ Biological Insecticide, Miticide, Nematicide acts as an insect anti-feedant, insect growth regulator (IGR), and insect repellant.

<table>
<thead>
<tr>
<th>EPA Signal Word</th>
<th>Chemical Name</th>
<th>Chemical Class</th>
<th>EPA Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUTION</td>
<td>AZADIRACHTIN</td>
<td>BIOPESTICIDE</td>
<td>71908-1-81268</td>
</tr>
</tbody>
</table>

Formulator:

PARRY AMERICA INC.
2740 Fulton Avenue
Suite 220
Sacramento, CA 95821
916-973-1351

Emergency Telephone Numbers:

Hazard Information Services (H.I.S.)
1-800-228-5635

CHEMTREC®
1-800-424-9300

2. Ingredients

<table>
<thead>
<tr>
<th>Chemical Component</th>
<th>Percent Range</th>
<th>CAS Numbers</th>
<th>OSHA-PEL</th>
<th>ACGIH-TLV</th>
<th>NTP/IARC/OSHA</th>
<th>CARCINOGEN</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZADIRACHTIN</td>
<td>1.2%</td>
<td>11141-17-6</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>95507-03-2</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Ingredients</td>
<td>98.8%</td>
<td></td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview:

Physical Properties

- Appearance: Brown, honey-colored liquid
- Odor: Mild neem fragrance
- Hazardous Decomposition Products: None Known
- Unusual Fire, Explosion, and Reactivity Hazards: None Known

Potential Health Effects

- Acute Effects: Harmful if absorbed through the skin
- Symptoms of Acute Exposure: None Know
- Chronic Effects: None Known
- Carcinogenicity: None of the components in this material is listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

4. First Aid Measures

Primary Routes of Exposure:

- Inhalation, Ingestion, Skin, and Eyes

Sign and Symptoms of Exposure:

- Inhalation: May be irritating to mucous membranes and excessive exposure may result in drowsiness.
- Ingestion: May cause drowsiness.
- Skin Contact: May cause mild irritation.
- Eye Contact: May cause mild irritation.

Emergency First Aid Procedure:

- If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. Get medical attention.
- If Ingested: Induce vomiting by gastric lavage. Call a physician for medical advice.
- If on Skin: Take off contaminated clothing. Wash skin with plenty of soap and water. Call a physician for medical advice.
- If in Eyes: Hold eye open and rinse slowly & gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, and then continue rinsing eyes with excessive water. Call a physician for medical advice.

5. Fire Fighting Measures

Flash Point: >340°F

Upper & Lower Flammable Limits: NK

Fire Extinguishing Media: CO₂, Dry Chemical, Foam

Special Fire Fighting Procedures: Evacuate personnel to a safe area. Wear positive-pressure breathing apparatus and full protective clothing. Fight fire from maximum distance. Stay up-wind and out of low areas.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled

General: Consult an expert on the disposal of recovered material. Ensure disposal is in compliance with government requirements and ensure conformity of local disposal regulations. Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill.

Specific: Evacuate personnel, thoroughly ventilate area, and use self-contained breathing apparatus and protective clothing. Dike spill. Absorb spilled material with Dri-Rite, sawdust, sand, or other absorbent material, taking care not to generate dust. Collect clean-up material into drums, cover, and label for disposal according to local regulations. Scrub contaminated area with detergent and water. Prevent liquid from entering sewers, waterways, or low areas. Product is not regulated under RCRA or CERCLA.

7. Handling and Storage

Precautions in Handling: Do not contaminate water, food, or feed by storage or disposal. Wash hands before eating, drinking, chewing gum, using tobacco products, or using the toilet. Remove clothing immediately if pesticide gets inside and then wash thoroughly and put on clean clothes.

Storage: Keep in tightly closed and original containers. Do not store this product above 105°F or below 32°F for extend periods of time. Best to keep in cool dry place and to avoid direct sunlight. Do not re-fill or re-use containers. Dispose of containers in an approved waste facility.
**8. Exposure Controls/Personal Protection**

**Ventilation Requirements:**
Thorough ventilation is recommended in case of accidental spillage.

**Personal Protective Equipment:**
Harmful if absorbed through skin or inhaled. Avoid breathing vapor. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing before reuse.

**Manufacturing and Packaging Employees:**
- **Eye/Face:** Wear chemical safety goggles
- **Skin Protection:** Wear protect gloves
- **Respiratory Protection:** Thorough ventilation is recommended in case of accidental spillage
- **Additional Information:** Wash hands before eating, drinking, chewing gum, using tobacco products, or using the toilet. Remove clothing immediately if pesticide gets inside and then wash thoroughly and put on clean clothing.

**Applicators and Handlers:** Must wear long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks.

**9. Physical and Chemical Properties**

- **Appearance:** Brown, honey-colored liquid
- **Specific Gravity:** 0.985 g/cm³ @ 18°C
- **Dispersion in Water:** 100%
- **pH:** 7.0 @ 18°C
- **Odor:** Mild neem fragrance
- **Viscosity:** 281.4 mm²/s @ 20°C

**10. Stability and Reactivity**

Stability: Stable at ordinary conditions of use and storage.

Incompatibility: Avoid acids, alkali or oxidizing agents.

Decomposition/By Products: No hazardous materials are produced.

Hazardous Polymerization: Does not occur.

**11. Toxicological Information**

- **Acute Toxicity/Irritation Studies:**
  - **Acute Oral:** Rat LD₅₀ > 5,000 mg/kg
  - **Acute Dermal:** Rat LD₅₀ > 2,000 mg/kg
  - **Acute Inhalation:** Rat LD₅₀ > 5.4 mg/l
  - **Primary Eye Irritation:** Rabbit – No irritation
  - **Primary Skin Irritation:** Rabbit – Mild irritation
  - **Skin Sensitization:** Guinea Pig – No sensitization

**12. Ecological Information**

- **Effect on Honeybees:** Harmless
- **Effect on Earthworms:** Harmless (>1,000 mg/kg)
- **Effect on Predators:** Harmless
- **Hazard to Soil Microflora:** Non hazardous
- **Acute Fish Toxicity (Rainbow Trout):** LC₅₀ = 440 mg/l (24 hours)
- **Acute Daphnia Immobilization:** EC₅₀ > 50 mg/l
- **Algal Inhibition Test:** Non inhibitory, non stimulant
- **Metabolism in Soil:** Rapid decomposition in soil
- **Degradability in Water:** Readily biodegradable in water

**13. Disposal Considerations**

Do not contaminate water, food, or feed by storage or disposal. Dispose of containers in an approved disposal facility – refer to product labeling. Open dumping is prohibited. Do not re-fill or re-use containers. Ensure compliance with Local, State, and Federal regulations. Do not flush to surface water or sanitary sewer systems.

**14. Transportation Information**

- **DOT Classification:** Not regulated
- **International Maritime Organization:** Not regulated
- **International Civil Aviation Organization:** Not regulated
- **Special Instructions:** No special instruction on handling required
- **Flammability:** Non flammable
- **Transport by Air:** Safe for Air Transport

**15. Regulatory Information**

- **SARA Title III Classifications**
  - **Section 302/304:** N/A
  - **Section 311/312:** N/A
  - **Section 313 Chemical(s):** N/A

- **Proposition 65:** Not Applicable

- **CERCLA Reportable Quantity (RQ):** Not Applicable

- **RCRA Classification:** Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

- **TSCA Status:** Not Applicable

**16. Other Information**

**NFPA Hazard Ratings**
- **Health:** 1
- **Flammability:** 1
- **Reactivity:** 0

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Least</td>
</tr>
<tr>
<td>1</td>
<td>Slight</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>High</td>
</tr>
<tr>
<td>4</td>
<td>Severe</td>
</tr>
</tbody>
</table>

Prepared by: PARRY AMERICA INC.

The information contained herein is provided in good faith and is believed to be correct as of the date. However, PARRY AMERICA INC. makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in deforming its appropriateness for a specific purpose. Accordingly, PARRY AMERICA INC. will not be responsible for damage of any kind resulting from the use of or reliance upon such information.

AzaMax™ is a trademark of PARRY AMERICA INC.
Product
AzaMax® Botanical Insecticide, Miticide, and Nematicide

Company
Parry America Inc.
Narasimha Rao Kothapalli
5605 N MacArthur Blvd., Ste 1000
Irving, TX 75038

Status
Allowed with Restrictions

Category
NOP: Neem Extract and Derivatives

Issue date
20-Aug-2008

Product number
pai-1252

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Sep-2017

Restrictions
May be used as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.

OMRI Listed
The following product is OMRI Listed. It may be used in certified organic production or food processing and handling according to the USDA National Organic Program Rule.

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the current OMRI Standards Manual®. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Products List® at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator’s responsibility to properly use the product, including following any restrictions.

Organic Materials Review Institute
P.O. Box 11558, Eugene, OR 97440-3758, USA
541.343.7600 • fax 541.343.8971 • info@omri.org • www.omri.org
Azatrol
EC Insecticide

BOTANICAL INSECTICIDE, REPELLENT, ANTI-FEEDANT AND INSECT GROWTH REGULATOR (IGR)

• INDOOR AND OUTDOOR VEGETABLES, ORNAMENTAL FLOWERS, TREES, TURFGRASS, SHRUBS AND PLANTS, INCLUDING PLANTS GROWN IN CONTAINERS, INTERIORSCAPES, HOME AND GARDEN USE.

ACTIVE INGREDIENT:
Azadirachtin ................................................................. 1.2%
OTHER INGREDIENTS: ................................................................. 98.8%

TOTAL 100.0%
Contains 0.0997 lb. azadirachtin per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION
See next column for Precautionary Statements, First Aid and Full Directions for Use.

TABLE OF CONTENTS
CLICK ON HEADINGS TO JUMP TO THAT SECTION

INGREDIENT STATEMENT ................................................................. 1
PRECAUTIONARY STATEMENTS ................................................................. 1
FIRST AID ................................................................. 1
DIRECTIONS FOR USE ................................................................. 2
PRODUCT DESCRIPTION ................................................................. 2
INDOOR AND OUTDOOR ORNAMENTAL TREES,
SHRUBS, FLOWERS AND PLANTS ................................................................. 2
Target Pests, Table 1 ........................................................................ 2-3
Spray Preparation and Tank Mixtures ................................................................. 3
Application Equipment ................................................................. 3
Application Schedule ................................................................. 3
Application Rates For Ornamentals, Table 2 ................................................................. 4
High Volume and Low Volume Applications, Tables 3 and 4 ................................................................. 4
TURFGRASS ........................................................................ 5
Application Rates, Table 5 ........................................................................ 5
DRENCH APPLICATION FOR GREENHOUSES, NURSERIES,
INTERIORSCAPES AND FOR PLANTS
GROWN IN CONTAINERS ........................................................................ 5
GARDEN CROPS, VEGETABLES, HERBS AND SPICES
FRUITS, AND BERRIES ........................................................................ 6
Application Rates, Table 6 ........................................................................ 6-7
CHEMIGATION INFORMATION ........................................................................ 7-8
STORAGE & DISPOSAL ........................................................................ 8
LIMITED WARRANTY AND DISCLAIMER ........................................................................ 8

READ ENTIRE LABEL BEFORE EACH USE.
OBSEERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals
CAUTION: Harmful if absorbed through skin or if inhaled. Avoid breathing vapor. Causes moderate eye irritation. Prolonged or repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash clothing before reuse.

FIRST AID
If on skin or clothing:
• Take off contaminated clothing.
• Rinse skin immediately with plenty of water for 15-20 minutes.
• Call a poison control center or doctor for treatment advice.

If inhaled:
• Move person to fresh air.
• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
• Call a poison control center or doctor for further treatment advice.

If in eyes:
• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
• Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

In case of medical emergency involving this product, you may call toll free, 1-877-800-5558 for additional treatment information.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Applicators and other handlers must wear:
• Long sleeved shirt and pants
• Waterproof gloves
• Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS
Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS:
This pesticide is toxic to fish and aquatic invertebrates. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwater or rinsate.

DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170.

This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on (continued on next page)
AGRICULTURAL USE REQUIREMENTS (cont.)
this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).
Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:
Coveralls
Waterproof gloves
Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS
These requirements apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. For other uses, including golf courses and other non-agricultural uses, do not enter treatment areas without protective clothing until sprays have dried.

Read entire label. Use strictly in accordance with precautionary statements and directions, and with applicable state and federal regulations.
This is an end use product. PBI/Gordon Corporation does not intend that this product be reformulated or repackaged except under a toll repackaging agreement.

PRODUCT DESCRIPTION:
Azatrol® EC Insecticide is a botanical product for control of insect pests on indoor and outdoor plants including ornamental trees, shrubs, flowers, garden vegetables, turfgrass, fruit trees and nut trees.

Azatrol® EC Insecticide is repellant and anti-feedant properties and acts as an oviposition deterrent for some insects. When used as a component of an Integrated Pest Management (IPM) program, Azatrol® EC Insecticide provides an effective resistance management tool.

MODE OF ACTION:
Azatrol® EC Insecticide controls target pests on contact or by ingestion. The product acts on pests by way of repellence, anti-feedance, and interference with the molting process.

Azadirachtin, an insect growth regulator (IGR), mimics the pests’ hormones and disrupts distinct stages of growth and development of insects and mites. The primary mode of action of azadirachtin is an interference with synthesis and metabolism of ecdysterone and the juvenile hormone.

Ecdysone is the molting hormone of insects, and azadirachtin affects this regulation leading to death before or during molting.

INDOOR AND OUTDOOR ORNAMENTAL TREES, SHRUBS, FLOWERS, AND PLANTS ESTABLISHED IN RESIDENTIAL, LANDSCAPE PLANTINGS AROUND INSTITUTIONAL, PUBLIC, COMMERCIAL AND INDUSTRIAL BUILDINGS, PARKS, RECREATIONAL AREAS, GREENHOUSES, SHADECLOTHS, NURSERIES, AND ATHLETIC FIELDS.

Azatrol® EC Insecticide has been evaluated for phytotoxicity on a wide range of ornamentals and crops. However, since testing on all plant varieties is not feasible, test a small portion of the area to be treated for phytotoxicity before treating the entire area. All possible combinations of pesticide sprays, including other fertilizers, surfactants, and adjuvants and other pesticides have not been tested. Thus, testing for phytotoxicity of spray mixtures is recommended.

The professional user assumes the responsibility for determining the level of tolerance of treated plants to Azatrol® EC Insecticide when applied alone or in tank-mix combinations under commercial growing conditions.

Waxy bloom on certain ornamental plants may be reduced after an Azatrol® EC Insecticide application.

Applications of Azatrol® EC Insecticide may remove the glaucous 'blue' coloring from evergreens such as Colorado blue spruce and Koster spruce.

Use Azatrol® EC Insecticide on the following plants:

<table>
<thead>
<tr>
<th>Ornamental Plants and Flowers including but not limited to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actinotus, African violet*, ageratum, aglaonema, Algerian ivy, allamanda, alcea, amaranthus, artemisia, aster, aurea, axel, azalea, baby's breath, begonia, Boston fern, bougainvillea, boxwood, brachycome, cacti, calceolaria, celosia, celosia, cane, carnation, catnachis, chrysanthemum, cineraria, clivia, columbia, cotonaster, cymes, daisy, daylily, delphinium, diantus, diosbergis, dogwood, dusty miller, Easter lily, English ivy, euphorbia, fern, ficus, foliage plants, foxglove, freesia, fuchsia, gaura, gardenia, geranium, gerbera, giada, gloriosa, gypsophila, hebes, helen, helichrysum, hydrangea, ilex, impatiens, iris, ivy, amaranth, illic, lilac, maidenhair fern, maneville, margil, maccus, nasturtium, crocos*, pansy, peonies, peony, perennials, petunia, philodendron, phlox, phlox, pink, pittosporum, poinsettia*, pothos, portulaca, primrose, pycanthus, rhododendron, rose, rosarium, rubber plant, sahia, schefflera, sedum, sempervivum, spandregen, spathiphilum, stock, syngonium, tulip, verbena, vine, waving jaw, yucca, zizia</td>
</tr>
</tbody>
</table>

*Caution is recommended when making applications to these species. Spreading of plant foliage and blossoms is possible.

PESTS CONTROLLED OR SUPPRESSED
Use Azatrol® EC Insecticide against the following pests presented in Table 1.

<table>
<thead>
<tr>
<th>TABLE 1. TARGET PEST SPECIES OF AZATROL® EC INSECTICIDE.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEMIPTERA and HOMOPTERA including but not limited to:</td>
</tr>
<tr>
<td>true bugs including box elder bugs, chinch bugs, lygus bugs and stink bug:lacebugs, leafhoppers including grape leafhopper, spittlebug, potato leafhopper and variegated leafhopper; mealy bugs including apple mealy bugs, citrus mealy bugs, grape mealy bugs; whitefly; including greenhouse whitefly, silver leaf whitefly and sweet potato whitefly and woolly whitefly; aphids including apple aphid, green peach aphid, melon aphid, pear aphid, potato aphid and rose aphid; psyllids including pear psyllids and scales including black scale, brown soft scale, California red scale, coffee scale, olive scale, San Jose scale, and cottony cushion scale.</td>
</tr>
<tr>
<td>LEPIDOPTERA including but not limited to: moths including European pine shoot moth, pine looper moth and Tussock moth; leafrollers including blueberry leafroller, filbert leafroller, fruit tree leafroller, citrus leafrollers, grape leafroller, oblique banded leafroller, omnivorous leafroller; cutworms including black cutworm and cutworm caterpillars and looper; including bagworms, budworms, cabbage looper, canker worms, case bearers, caseworms, corn earworm, diamondback moth, leafworms, grape leaf skeletonizer, gypsy moth, hornworms, imported cabbageworm, navel orangeworm, soybean looper, spruce budworm, tent caterpillar, tip moths, tent caterpillars, tobacco budworm, tobacco hornworm, tomato pinworm and teesack moth; armyworms including beet armyworm, fall armyworm, twin armyworm, southern armyworm, and yellow striped armyworm; webworms and leaf perforators.</td>
</tr>
<tr>
<td>COLEOPTERA including but not limited to: beetles, grubs and weevils including Asian longhorned beetle, bark beetles, black vine weevil, Colorado potato beetle, elm bark beetle, European chafer, flea beetle, Japanese beetle, June beetles, leaf beetles, Mexican bean beetle, northern maskined chaffer, rose chafer, and Southern masked chaffers and twig girders.</td>
</tr>
<tr>
<td>DIPHTERA including but not limited to: flies including Caribbean fruit fly, cherry fruit fly, Medfly, orange fruit fly, and Oriental fruit fly; Mediterranean fruit fly, march cane flies, melon fly, shore flies, and walnut husk fly; leafminers including citrus leafminer and serpenine leafminers.</td>
</tr>
</tbody>
</table>

(Table 1 cont. on next page)
TABLE 1. TARGET PEST SPECIES OF AZATROL® EC INSECTICIDE (continued).

<table>
<thead>
<tr>
<th>Thyasoperta</th>
<th>Acarina</th>
<th>Orthoptera</th>
<th>Hymenoptera</th>
<th>Nematoda</th>
</tr>
</thead>
<tbody>
<tr>
<td>including but not limited to: thrips; including citrus thrips, flower thrips, galls, thrips; onion thrips; thrips; palm and Western flower thrips.</td>
<td>including but not limited to: mites; red spider mites, brown mite, clover mite, conifer spider mite, European red mite, spruce spider mite, and two-spotted spider mite.</td>
<td>including but not limited to: crickets; grasshoppers; locusts.</td>
<td>including European sawflies, pear sawflies, red-headed pine sawflies, yellow-headed pine sawflies.</td>
<td>nematodes (suppression)</td>
</tr>
</tbody>
</table>

SPRAY PREPARATION

Azatrol® EC Insecticide is an emulsifiable concentrate to be diluted with water.

Water as diluent:
Add one-half the required amount of water to the spray tank, then add Azatrol® EC Insecticide slowly with agitation, and complete filling the tank with water. To prevent separation of the emulsion, mix thoroughly and continue agitation while spraying.

This product forms an emulsion and can separate upon extended or prolonged standing. Re-agitate to assure uniformity of the spray mixture.

It is suggested that the water pH be 5 to 7. Do not use tank additives that alter the pH of the spray solution above pH 7. Buffer the spray solution to alter the pH range as appropriate.

Prepare only the volume needed for the intended application, and use the spray mixture within 24 hours of preparation.

TANK MIXTURES

Azatrol® EC Insecticide is an emulsifiable concentrate and is compatible with commonly used pesticides and fertilizers. Always check the physical compatibility with a jar test in the correct proportions if needed.

If a broader spectrum of control is required tank-mix Azatrol® EC Insecticide with insecticides or miticides. If a rapid knockdown of heavy populations is necessary, then include an effective contact insecticide/miticide in combination with Azatrol® EC Insecticide.

Tank mixture recommendations are for use only in states where the companion product(s) and the application site are registered.

Always read and follow the directions for use, precautions and limitations for use on all product labels used in combination. Applications must follow the precautions and limitations of the most restrictive product label in the mixture. Do not exceed the dosage rates of any product.

Select the right companion products:
IPM uses a variety of control options including biological, chemical, and cultural practices. Azadirachtin is botanical with growth regulator effect on insects and mites. Companion products include pyrethroids, spinosyns, microbial toxins, and chloronicotinyls that can complement azadirachtin. Formulations of bifenthrin, spinosad, abamectin, and imidacloprid are effective for different pests. Select the product that has been proven to provide adequate performance for the pests you are trying to control.

Physical Incompatibility
Do not use Azatrol® EC Insecticide with Captan, Bordeaux mixture, triphenyltin hydroxide, lime sulfur, Rapilix iron or other highly alkaline materials as they can cause phytotoxicity and reduced efficacy on some target pests. Tank-mix combinations with compounds known to be incompatible with oil-based formulations are not to be used or phytotoxicity may occur.

ADJUVANTS
The addition of adjuvants may enhance control under certain conditions; the use of adjuvants or oils may cause phytotoxicity and should be thoroughly tested prior to use. Do not add crop oils to spray mixtures intended for use on ornamental plants, flowers, trees, and shrubs.

APPLICATION EQUIPMENT

Ground Equipment
Apply Azatrol® EC Insecticide with hand-operated (manual) or power spray equipment suitable for low volume and/or high volume applications. Follow the recommendations of the equipment manufacturer when using backpack sprayers, hose-end sprayers, compression (pump-up) sprayers, and other sprayers suitable for foliar applications of insecticides.

Chemigation and Subsurface Equipment
Azatrol® EC Insecticide may also be applied through chemigation systems and sub-soil treatment equipment; always follow equipment manufacturer's directions.

APPLICATION SCHEDULE
For the most effective control, apply the product when pests are expected to appear or as soon as possible after pests appear and are in immature stages. Spray at intervals of seven (7) to ten (10) days or as the situation warrants.

During high pest infestation levels or when canopy is dense use higher dosage (use) rates and increase the spray frequency. Spraying in the morning or evening hours is recommended. Repeat spraying if rain occurs within two to three hours of spraying.

For additional guidance, consult with the state agricultural experiment station or local extension entomologist for information on tactics and windows of application.

APPLICATION RATES
Use Azatrol® EC Insecticide on ornamental pests as a spray concentration of 0.25-1.70% vol/vol per treatment with high volume applications in Table 2.

The application rates are specified as rate ranges depending upon the pest infestations:

Lower rate ranges with a spray concentration of 0.25-0.75% vol/vol:
Use lower rate ranges for light infestations of lepidopterous insects, at the first sign or at the first observation of the early and uniform growth stages of the pest(s), and/or tank mixtures with contact insecticides.

Medium rate ranges with a spray concentration of 0.75-1.25% vol/vol:
Use medium rate ranges for moderate infestations, where multiple growth stages of the pests are present, and/or heterogeneous pesticide populations are present.

Upper rate ranges with a spray concentration of 1.25-1.70% vol/vol:
Use upper rate ranges for moderate to heavy pest populations of difficult to control pest species, for the late stages of larva/worms, for dense foliage, and/or when re-infestations are expected.

High Volume Applications:
Apply Azatrol® EC Insecticide at spray concentration of 0.25-1.70% v/v in sufficient amount of water to achieve complete coverage. Use an adequate spray volume to wet the leaves (foliage) and stems. Spray volumes will vary with the plant size.

Attempt to penetrate dense foliage. Thorough coverage of the upper and lower leaf surfaces is critical for effective levels of control.

Refer to Table 3 for the amounts of Azatrol® EC Insecticide required to prepare spray concentrations of 0.25% to 1.70% for spray volumes of 1 gallon to 200 gallons.

Specialized Low Volume Applications:
Select a spray volume to achieve sufficient coverage. Uniform coverage of both upper and lower leaf surfaces is critical for effective insect control.

Apply Azatrol® EC Insecticide in a minimum spray volume of 5 gallons per acre. Larger plants will require the higher spray volumes (20-25 gallons per acre) to obtain sufficient coverage.

Do not exceed 20 grams active ingredient per acre per application or 57 fl. oz. of product per acre per application.

Refer to Table 4 for the amounts of Azatrol® EC Insecticide required to prepare spray concentrations of 0.25% to 1.70% for spray volumes of 5-25 gallons per acre.

SEE NEXT PAGE FOR TABLE 2, 3 AND 4
### Table 2. Application Rates for Ornamentals Established in Residential, Landscape Plantings Around Institutional, Public, Commercial and Industrial Buildings, Parks, Recreational Areas, Greenhouses, Shade Cloths, Nurseries, and Athletic Fields

<table>
<thead>
<tr>
<th>USE</th>
<th>PEDESTAL</th>
<th>SPRAY CONCENTRATION %</th>
<th>Amounts of Azatrol EC Insecticide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fluid ounces per gallon</td>
</tr>
<tr>
<td>Including trees, shrubs, flowers, conifers, evergreens, herbaceous ornamentals, foliage plants, container-grown ornamentals, plants and groundcovers</td>
<td>Armyworms</td>
<td>Lower rate ranges of 0.25-0.75% vol/vol:</td>
<td>0.32-1.0 fl. oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.00-1.60 fl. oz.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper rate ranges of 1.25-1.70% vol/vol:</td>
<td>1.60-2.18 fl. oz.</td>
</tr>
<tr>
<td></td>
<td>Azalea caterpillars</td>
<td>Aphis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aphis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bagworms</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Black vine weevils</td>
<td>Boxelder bugs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Budworms</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Caterpillar</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cutworms</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eastern tent caterpillars</td>
<td>Elm leaf beetles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elm leaf beetles</td>
<td>European sawflies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>European sawflies</td>
<td>Fall webworms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fall webworms</td>
<td>Flea beetles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flea beetles</td>
<td>Forest tent caterpillars</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forest tent caterpillars</td>
<td>Gypsy moth larva</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gypsy moth larva</td>
<td>Japanese beetles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Japanese beetles</td>
<td>June beetles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>June beetles</td>
<td>Lace bugs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lace bugs</td>
<td>Leaf-feeding caterpillars</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leaf-feeding caterpillars</td>
<td>Leafhoppers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leafhoppers</td>
<td>Leafminers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leafminers</td>
<td>Leaf rollers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leaf rollers</td>
<td>Leaf skeletonizers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leaf skeletonizers</td>
<td>Oleander moth larvae</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oleander moth larvae</td>
<td>Pine sawflies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pine sawflies</td>
<td>Pine shoot beetles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pine shoot beetles</td>
<td>Pine tip moths</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pine tip moths</td>
<td>Plant bugs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plant bugs</td>
<td>Sawflies (larva)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sawflies (larva)</td>
<td>Scales (crawlers)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scales (crawlers)</td>
<td>Spruce budworm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spruce budworm</td>
<td>Striped beetles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Striped beetles</td>
<td>Striped oakworms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Striped oakworms</td>
<td>Thrips</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thrips</td>
<td>Turk's cap moth larvae</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Turk's cap moth larvae</td>
<td>Brown soft scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown soft scale</td>
<td>California red scale (crawlers)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>California red scale (crawlers)</td>
<td>Clover mites</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clover mites</td>
<td>Mealybugs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mealybugs</td>
<td>Pine needle scale (crawlers)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pine needle scale (crawlers)</td>
<td>Spotted winged scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spotted winged scale</td>
<td>and other species</td>
<td></td>
</tr>
</tbody>
</table>

*Identified in Table 1.*

### Table 3. Spray Preparation for High Volume Applications for Spray Concentrations of 0.25% to 1.70%.

<table>
<thead>
<tr>
<th>Gallons Of Water</th>
<th>0.25%</th>
<th>0.50%</th>
<th>0.75%</th>
<th>1.00%</th>
<th>1.25%</th>
<th>1.50%</th>
<th>1.70%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gallon</td>
<td>0.32 fl. oz.</td>
<td>0.64 fl. oz.</td>
<td>0.96 fl. oz.</td>
<td>1.28 fl. oz.</td>
<td>1.80 fl. oz.</td>
<td>1.94 fl. oz.</td>
<td>2.18 fl. oz.</td>
</tr>
<tr>
<td>5 gallons</td>
<td>1.60 fl. oz.</td>
<td>3.2 fl. oz.</td>
<td>4.8 fl. oz.</td>
<td>6.4 fl. oz.</td>
<td>8.0 fl. oz.</td>
<td>9.7 fl. oz.</td>
<td>10.9 fl. oz.</td>
</tr>
<tr>
<td>10 gallons</td>
<td>3.2 fl. oz.</td>
<td>6.4 fl. oz.</td>
<td>9.6 fl. oz.</td>
<td>12.8 fl. oz.</td>
<td>16.0 fl. oz.</td>
<td>19.4 fl. oz.</td>
<td>21.8 fl. oz.</td>
</tr>
<tr>
<td>25 gallons</td>
<td>8.0 fl. oz.</td>
<td>16.0 fl. oz.</td>
<td>24.0 fl. oz.</td>
<td>32.0 fl. oz.</td>
<td>41.6 fl. oz.</td>
<td>53.2 fl. oz.</td>
<td>61.8 fl. oz.</td>
</tr>
<tr>
<td>50 gallons</td>
<td>16.0 fl. oz.</td>
<td>32.0 fl. oz.</td>
<td>48.0 fl. oz.</td>
<td>64.0 fl. oz.</td>
<td>80.0 fl. oz.</td>
<td>100.0 fl. oz.</td>
<td>121.8 fl. oz.</td>
</tr>
<tr>
<td>100 gallons</td>
<td>1.0 qt.</td>
<td>2.0 qts.</td>
<td>3.0 qts.</td>
<td>4.0 qts.</td>
<td>5.0 qts.</td>
<td>5.0 qts.</td>
<td>6.0 qts.</td>
</tr>
<tr>
<td>150 gallons</td>
<td>1.5 qts.</td>
<td>3.0 qts.</td>
<td>4.5 qts.</td>
<td>6.0 qts.</td>
<td>7.5 qts.</td>
<td>7.5 qts.</td>
<td>9.0 qts.</td>
</tr>
<tr>
<td>200 gallons</td>
<td>2.0 qts.</td>
<td>4.0 qts.</td>
<td>6.0 qts.</td>
<td>8.0 qts.</td>
<td>10.0 qts.</td>
<td>10.0 qts.</td>
<td>12.0 qts.</td>
</tr>
</tbody>
</table>

### Table 4. Spray Preparation for Specialized Low Volume Applications of 5-25 Gallons Per Acre With Spray Concentrations of 0.25% to 1.70%.

<table>
<thead>
<tr>
<th>Spray Concentration Desired, % vol/vol</th>
<th>5 gpa</th>
<th>10 gpa</th>
<th>15 gpa</th>
<th>20 gpa</th>
<th>25+ gpa</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25% vol/vol</td>
<td>1.6 fl. oz./acre</td>
<td>3.2 fl. oz./acre</td>
<td>4.8 fl. oz./acre</td>
<td>6.4 fl. oz./acre</td>
<td>8.0 fl. oz./acre</td>
</tr>
<tr>
<td>0.50% vol/vol</td>
<td>3.2 fl. oz./acre</td>
<td>6.4 fl. oz./acre</td>
<td>9.6 fl. oz./acre</td>
<td>12.8 fl. oz./acre</td>
<td>16.0 fl. oz./acre</td>
</tr>
<tr>
<td>0.75% vol/vol</td>
<td>4.8 fl. oz./acre</td>
<td>9.6 fl. oz./acre</td>
<td>14.4 fl. oz./acre</td>
<td>19.2 fl. oz./acre</td>
<td>24.0 fl. oz./acre</td>
</tr>
<tr>
<td>1.00% vol/vol</td>
<td>6.4 fl. oz./acre</td>
<td>12.8 fl. oz./acre</td>
<td>19.2 fl. oz./acre</td>
<td>25.6 fl. oz./acre</td>
<td>32.0 fl. oz./acre</td>
</tr>
<tr>
<td>1.25% vol/vol</td>
<td>8.0 fl. oz./acre</td>
<td>16.0 fl. oz./acre</td>
<td>24.0 fl. oz./acre</td>
<td>32.0 fl. oz./acre</td>
<td>40.0 fl. oz./acre</td>
</tr>
<tr>
<td>1.50% vol/vol</td>
<td>9.6 fl. oz./acre</td>
<td>19.2 fl. oz./acre</td>
<td>28.8 fl. oz./acre</td>
<td>38.4 fl. oz./acre</td>
<td>48.0 fl. oz./acre</td>
</tr>
<tr>
<td>1.70% vol/vol</td>
<td>10.8 fl. oz./acre</td>
<td>21.6 fl. oz./acre</td>
<td>32.4 fl. oz./acre</td>
<td>43.2 fl. oz./acre</td>
<td>54.0 fl. oz./acre</td>
</tr>
</tbody>
</table>
SPECIFIC USE INSTRUCTIONS:

Decision-making for IPM:
Scouting, monitoring, sampling, record-keeping, and predictive models are techniques to determine if and when insecticide/miticide applications are needed. The application schedule should coincide with the most vulnerable stages of the pest. For azadirachtin, target the most vulnerable stages of young larvae and young nymphs. The early larval stages and the early instar stages are more susceptible to this IGR than the later stages of the same pests.

For Lepidoptera:
• Armyworms: Apply when larvae are small.
• Bagworms: Apply when bags are small and larvae are actively feeding.
• Gypsy moth larvae: Apply when larvae are small and all eggs have hatched.
• Spruce budworms: Apply when larvae are exposed and actively feeding.

For Acarina:
• Spider mites: Apply when nymphs are first observed and before mite populations have become severe. Use multiple applications with 7-10 day intervals until infestation is controlled. Thorough coverage of both upper and lower leaf surfaces is needed.

For Thysanoptera:
• Thrips: Apply early at first signs of infestation and repeat until infestation is controlled.

For Homoptera:
• Sawfly: Apply when larvae are small.

For Hemiptera and Homoptera:
• Leaffoppers: Apply when first observed and repeat applications at 5-7 day intervals.
• Mealybugs: Obtain thorough coverage of leaves and twigs.
• Scale: Obtain thorough coverage of leaves and twigs.

For Coleoptera:
• Beetles: Apply early at first signs of infestation and repeat applications at 7-10 day intervals.
• Japanese beetle (adults): Use foliar applications to repel adult feeding and treat at 5-7 day intervals.

For Diptera:
• Leafminers: Apply early to larvae when stippling or mining of leaves is observed. Repeat applications at 7-10 day intervals until infestation is controlled.

TURFGRASS ESTABLISHED IN RESIDENTIAL (LAWNS), INSTITUTIONAL, PUBLIC, COMMERCIAL AND INDUSTRIAL SITES, PARKS, RECREATIONAL AREAS, GOLF COURSES, SOD FARMS, AND ATHLETIC FIELDS

Use Azatrol® EC Insecticide to control the pests presented in Table 5. Dilute Azatrol® EC Insecticide in water.

The most vulnerable stage to this product is young larvae and nymphs. Schedule treatments for the early larval stages and early instars when populations are established, but before turf damage becomes noticeable. The maximum rate on turfgrass of Azatrol® EC Insecticide is 57.0 fl. oz. of product per acre per application or 1.3 fl. oz. product per 1,000 sq. ft per application. Apply at a rate up to 57 fl. oz. of product per acre. Use the higher rate specified on this label for moderate to heavy infestations.

Irrigation:
Avoid (delay or postpone) irrigation for 12-24 hours after application of this product.

Mowing:
Avoid (delay or postpone) mowing of the treated area for 12-24 hours after treatment.

Degree day and plant phenology models can assist in developing the appropriate application schedule for the target pests. Consult your state university or local Cooperative Extension Service office for specific pest control application timing in your area.

Azatrol® EC Insecticide can be tank mixed with other insecticide/miticides if a broader spectrum of pest control is required. Observe all precautionary statements and follow all label directions of companion products.

Specific Use Instructions:
1. Armyworms: Apply during the early morning or late afternoon to maximize control.
2. Sod webworm larvae: Applications in the late afternoon or early evening can maximize control.

---

**TABLE 5. APPLICATION RATES FOR TURFGRASS ESTABLISHED IN RESIDENTIAL (LAWNS), INSTITUTIONAL, PUBLIC, COMMERCIAL AND INDUSTRIAL SITES, PARKS, RECREATIONAL AREAS, GOLF COURSES, SOD FARMS, AND ATHLETIC FIELDS.**

<table>
<thead>
<tr>
<th>Use</th>
<th>Pests</th>
<th>Amount of Azatrol® EC Insecticide (oz. /acre)</th>
<th>Spray Volumes (gals./acre, per 1,000 sq. ft)</th>
<th>Number of Applications &amp; Interval Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cool Season and Warm Season Turfgrass</td>
<td>Larvae and nymphs of these pests including, but not limited to: Armyworms, Bermudagrass mite, Codling moth, Grasshopper, Sod webworm, Ticks, Chiggers</td>
<td>Up to 57.0</td>
<td>40-100 gpa</td>
<td>As needed, 7 days</td>
</tr>
<tr>
<td></td>
<td>Outcrops</td>
<td>Up to 1.3</td>
<td>1-2 gals./1,000 sq. ft.</td>
<td></td>
</tr>
</tbody>
</table>

---

**DRENCH APPLICATION FOR GREENHOUSES, NURSERIES, INTERIORSCAPES AND FOR PLANTS GROWN IN CONTAINERS:**

Use Azatrol® EC Insecticide as a soil drench for effective control of soilborne insect pests. For azadirachtin, will have a slower rate of activity because of soil absorption when compared to foliar applications of azadirachtin. Target the initial application of a soil drench treatment to coincide with the early stages of young larvae and young nymphs.

Dilute Azatrol® EC Insecticide with water for concentrations of 0.4 to 0.8% vol/vol. Drench the soil in the pot with one (1) pint of finished spray per 1.0 gallon of soil. For fungus gnats, use the 0.4% spray concentration. For mushroom fly maggot control, use the 0.6% vol/vol spray concentration. For leafminers and other difficult to control pests, use the 0.8% vol/vol spray concentration. Two to three (2-3) applications should be scheduled at 10-14 day intervals until the pest pressure has ended.

SEE NEXT PAGE FOR DILUTION TABLE FOR DRENCH APPLICATIONS
Azatrol® EC Insecticide can also be applied through sub-surface treatment equipment. Always follow manufacturer’s use directions.

INSTRUCTIONS FOR GARDEN CROPS, VEGETABLES, HERBS AND SPICES, FRUITS, AND BERRIES

- For the most effective control, spray the product as soon as possible after pests appear and are in immature stages.
- Spray at an interval of seven to ten days or as the situation warrants. During high pest infestation levels use higher label rates and increase the spray frequency.
- Spraying in the morning or evening hours is recommended.
- Repeat spraying if rain occurs within two to three hours of spraying.

SPRAY EQUIPMENT

Use any suitable application equipment to ensure uniform coverage.

---

### DILUTION TABLE FOR DRENCH APPLICATIONS

<table>
<thead>
<tr>
<th>Gallons of Water</th>
<th>0.4%</th>
<th>0.5%</th>
<th>0.8%</th>
<th>Application Interval</th>
<th>Number of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 gallon</td>
<td>1 Tbs.</td>
<td>1.5 Tbs.</td>
<td>2.0 Tbs.</td>
<td>10-14 days</td>
<td>2-3</td>
</tr>
<tr>
<td>5 gallons</td>
<td>2.7 fl. oz.</td>
<td>4.0 fl. oz.</td>
<td>5.5 fl. oz.</td>
<td>10-14 days</td>
<td>2-3</td>
</tr>
<tr>
<td>10 gallons</td>
<td>5.4 fl. oz.</td>
<td>8.0 fl. oz.</td>
<td>11.0 fl. oz.</td>
<td>10-14 days</td>
<td>2-3</td>
</tr>
<tr>
<td>100 gallons</td>
<td>17.2 qts.</td>
<td>25.0 qts.</td>
<td>34.3 qts.</td>
<td>10-14 days</td>
<td>2-3</td>
</tr>
</tbody>
</table>

---

**USE RATES**

Apply Azatrol® EC Insecticide as directed to any food or non-food crop up to and including the day of harvest, at a maximum rate of 57 fl. ozs. (20 grams active ingredient) per acre (1.33 fl. ozs. per 1,000 sq. ft.) per application. Rates in Table 6 pertain to typical pest infestations.

Apply Azatrol® EC Insecticide alone to food/garden crops on the day of harvest.

Dilute this product with water at 0.5-4.0 tablespoons (Tbs) per gallon of water. For hose end sprayers, set the RATE PER GALLON at the dial setting of 1 to 4 Tbs., depending on the crop and pests. Use the lower RATE PER GALLON for low to moderate infestations and use the higher specified RATE PER GALLON for severe infestations.

---

### TABLE 6. USE RATES FOR GARDEN CROPS, VEGETABLES, HERBS AND SPICES, BERRIES AND FRUIT.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Pests such as:</th>
<th>Dilution Rate for Sprayers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Fl. Ozs. of product per 1,000 Sq. Ft.</td>
</tr>
<tr>
<td>Leafy Vegetables including but not limited to: Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Endive, Kale, Lettuce, Spinach</td>
<td>Leaffoppers, Cutworms, Loopers, Armyworms</td>
<td>0.19-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>True Bugs, Leafhoppers, Whiteflies, Aphids, Beeltees, Weevils, Flies, Thrips, Mites</td>
<td>0.24-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Root Vegetables, including but not limited to: Beet, Carrot, Horseradish, Parsnip, Potato, Radish, Sweet potato, Turnip, Yams</td>
<td>Beeltees, Weevils</td>
<td>0.11-0.22 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>True Bugs, Leafhoppers, Whiteflies, Aphids, Leaffitters, Cutworms, Loopers, Armyworms, Flies, Thrips, Mites</td>
<td>0.24-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Fruiting Vegetables including but not limited to: Eggplant, Pepper, Tomato, Tomato</td>
<td>Beeltees, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>Thrips</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>True Bugs, Leafhoppers, Whiteflies, Aphids, Leaffitters, Cutworms, Loopers, Armyworms, Flies, Mites</td>
<td>0.24-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Cucumber Vegetables including but not limited to: Cucumber, Gourd (edible), Muskmelon, Pumpkin, Squash, Watermelon, including Cantaloupe, Casaba, Gherkins, Melons (including hybrid), Zucchini</td>
<td>Beeltees, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>Thrips</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>True Bugs, Leafhoppers, Whiteflies, Aphids, Leaffitters, Cutworms, Loopers, Armyworms, Flies, Mites</td>
<td>0.24-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Legume Vegetables including but not limited to: Bean, Chickpea, Lentil, Pea</td>
<td>Beeltees, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>Thrips</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>True Bugs, Leafhoppers, Whiteflies, Aphids, Leaffitters, Cutworms, Loopers, Armyworms, Flies, Mites</td>
<td>0.24-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Bulb Vegetables including but not limited to: Garlic, Onion, Shallot</td>
<td>Beeltees, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>Thrips</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>True Bugs, Leafhoppers, Whiteflies, Aphids, Leaffitters, Cutworms, Loopers, Armyworms, Flies, Mites</td>
<td>0.24-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Berries including but not limited to: Blackberry, Blueberry, Raspberry, Strawberry, others include: Boysenberry, Currants, Dewberry, Elderberry, Gooseberry, Loganberry</td>
<td>Beeltees, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>Thrips</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td></td>
<td>True Bugs, Leafhoppers, Whiteflies, Aphids, Leaffitters, Cutworms, Loopers, Armyworms, Flies, Mites</td>
<td>0.24-0.96 fl. ozs.</td>
</tr>
</tbody>
</table>

(continued on next page)
<table>
<thead>
<tr>
<th>Crop</th>
<th>Pests such as:</th>
<th>Dilution Rate for Sprayers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herbs and Spices including but not limited to: Chive, Dill, Fennel, Mustard, Sage, Sweet bay, others include: Anise, Balm, Basil, Black pepper, Borago, Caraway, Catnip, Chamomile, Coriander, Cumin, Curry leaf, Dandelion, Fenugreek, Horehound, Hya scop, Marjoram, Marigold, Mint, Nasturtium, Pennyroyal, Peppermint, Rosemary, Savory, Spearmint, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood</td>
<td>Beetles, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Nut Trees including but not limited to: Almond, Brazil nut, Filbert, Hickory nut, Pecan, Pistachios, Walnut</td>
<td>Beetles, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Pome Fruits including but not limited to: Apple, Pear, Quince</td>
<td>Beetles, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Stone Fruits including but not limited to: Apricot, Cherry, Nectarine, Peach, Plum</td>
<td>Beetles, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
<tr>
<td>Citrus Fruits including but not limited to: Grapefruit, Lemon, Lime, Orange others include: Citrus Citron, Mandarin (tangerine), Nectarine, Satsuma (orange mandarin), Tangerine</td>
<td>Beetles, Weevils</td>
<td>0.29-0.96 fl. ozs.</td>
</tr>
</tbody>
</table>

CHEMIGATION GENERAL INFORMATION
Azatrol® EC Insecticide may be applied through drip (trickle) or sprinkler irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues can result from non-uniform distribution of treated water. Questions concerning calibration should be directed to your State Extension Service Specialist, the equipment manufacturer or other expert.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. Direct your questions concerning calibration to your State Extension Service Specialist, the equipment manufacturer, or other expert. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise.

Dilute Azatrol® EC Insecticide with water before introduction into the system. Use the diluted solution within 8 hours. Do not apply in irrigation water if the pH exceeds 7.0. The optimum pH range for application is 5.5 to 6.5. The pH of the irrigation water can be adjusted by use of a suitable buffering agent. Application is necessary. Apply at the specified rate using sufficient water to achieve an even distribution within an 8-hour period. Do not apply Azatrol® EC Insecticide at a rate that exceeds 3.5 pints active ingredient per acre (57 fl. oz).

Caution must be exercised in irrigation waters with a pH greater than 7. If the irrigation cycle will last longer than 8 hours and the Azatrol® EC Insecticide is premixed in the supply tank, the tank mix must be buffered to a pH of 8 or lower.

Precautions For Chemigation Systems Connected To A Public Water System
Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of a year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction.

There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top of overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in the cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speeds favor drift beyond the area intended for treatment.

Operation Of Sprinkler Chemigation Or Drip (Trickle) Utilizing A Pressurized Water And Pesticide Injection System: The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline

---

---
must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

---

**STORAGE & DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse container.

**PESTICIDE STORAGE:** Do not store this product above 105°F or below -15°F for extended periods of time. Keep containers tightly closed and in original containers when not in use.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:**

- **FOR PLASTIC CONTAINERS** – Triple rinse (or equivalent), Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed, by state and local authorities by burning, if burned stay out of smoke.

**DISPOSAL INSTRUCTIONS FOR RESIDENTIAL/HOUSING USE:**

- If empty: Do not reuse this container. Place in trash or offer for recycling if available.
- If partly filled: Call your local waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

---

**LIMITED WARRANTY AND DISCLAIMER.**

The manufacturer warranties only that the chemical composition of this product conforms to the ingredient statement given on the label, and that the product is reasonably suited for the labeled use when applied according to the Directions for Use.

**THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED.** This limited warranty does not extend to the use of the product inconsistent with label instructions, warnings or cautions, or to use of the product under abnormal conditions such as drought, excessive rainfall, tornados, hurricanes, etc. These factors are beyond the control of the manufacturer or the seller. Any damages arising from a breach of the manufacturer’s warranty shall be limited to direct damages, and shall not include indirect or consequential damages such as loss of profits or values, except as otherwise provided by law.

The terms of this Limited Warranty and Disclaimer cannot be varied by any written or verbal statements or agreements. No employee or agent of the seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.

**Organic Materials Review Institute (OMRI) Listed**

AZATROL® and GORDON'S® are registered trademarks of PBI/Gordon Corporation.

6617-2007 AP100104
EPA REG. NO. 2217-836

Manufactured By:

PBI/Gordon Corporation
An Employee-Owned Company
1217 West 12th Street
Kansas City, Missouri 64101
www.pbigordon.com
Product
Azatrol® EC Insecticide

Company
PBI/Gordon Corp.
Mr James "Jim" L. Kunstman, Ph.D
1217 W 12th St
Kansas City, MO 64101

Status
Allowed with Restrictions

Category
NOP: Neem Extract and Derivatives

Issue date
19-Aug-2003

Product number
pbi-3169

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Sep-2017

Restrictions
May be used as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.
“NPK Industries” presents

PM Wash

Water................99.9999%
Inert Ingredients..0.0001%
Dynamically Enhanced

READY TO USE
DO NOT DILUTE

DIRECTIONS FOR USE:

**PM Wash** may be used on fruits, vegetables, foliage, and flowers. Pour **PM Wash** directly into spray bottle or atomizer (do not dilute). Saturate top and bottom of leaves (entire plant) in order to achieve best results. It is effective throughout the grow and flower cycle (even during harvest). We recommend using **PM Wash** during the warmest, low humidity time of day (i.e. lights on). Use only as directed. Note: **PM Wash** works especially well when used while harvesting!

READY TO USE
DO NOT DILUTE

Manufactured for:
NPK Industries
+1.800.994.4508
www.npkindustries.com

1 Qt (946.35 mL) 32 oz
Material Safety Data Sheet

Section 1: IDENTIFICATION

Product Name: PM Wash – RTU
Product Type: Foliage Cleaner
Chemical Name: N/A
Formula: Proprietary

Section 2: PHYSICAL DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point (closed cup method)</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.9927</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Greater than 1</td>
</tr>
<tr>
<td>Boiling Point/Melting Point</td>
<td>&gt;200</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
</tbody>
</table>

Section 3: FIRE AND EXPLOSION HAZARD DATA

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extinguishing Media</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>Special Fire Fighting Procedure</td>
<td>N/A</td>
</tr>
<tr>
<td>Unusual Fire and Explosion Hazards</td>
<td>None required</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur</td>
</tr>
<tr>
<td>Materials to Avoid</td>
<td>N/A</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Below 35°F</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>None</td>
</tr>
</tbody>
</table>

Section 4: SPILL, LEAK AND DISPOSAL PROCEDURES

| Precautions if Material is Spilled or Released: | Soak spills with direct sand, sawdust, vermiculite, or other suitable absorbent materials to prevent slipping. |
| Waste Disposal Methods:                        | Dispose according to federal, state and local regulations |

Section 5: PROTECTION INFORMATION

<table>
<thead>
<tr>
<th>Protection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilation</td>
<td>Not normally required</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>Not normally required, but if vapor concentration is high due to heat, use respirator</td>
</tr>
<tr>
<td>Eye Protection</td>
<td>Safety glasses and goggles recommended.</td>
</tr>
</tbody>
</table>
Skin Protection: Standard rubber gloves and similarly approved type work clothes recommended.

Section 6: HEALTH HAZARD DATA

Occupational Exposure Limit: N/A
Threshold Limit Value: Not established
OSHA Permissible Exposure Limit: Not established
Health Hazard Determination: The components of this mixture have not been found to be carcinogenic. Components of this mixture can be irritating to the eyes. Their identity is proprietary and therefore considered a trade secret.
Effects of Overexposure: Contact of product with eyes may result in mild irritation reaction.

Emergency and First Aid Procedure:
Inhalation: Remove person from contaminated area to fresh air. If breathing is difficult, see physician
Skin: In case of eye or skin contact, flush with water. If irritation persists, contact physician.
Eyes: In case of eye or skin contact, flush with water. If irritation persists, contact physician.
Ingestion: In case of eye or skin contact, flush with water. If irritation persists, contact physician.

Section 7: STORAGE, HANDLING, SPECIAL PRECAUTIONS

Storage and Handling: Store in tightly sealed containers (preferably full) in cool dry area, away from heat, flame and sunlight
Special Precautions: None Required

US Poison Control Centers: 1-800-222-1222
Manufactured for: NPK Industries
1600 Skypark Dr. Suite 215
Medford, OR 97504
+1.800.944.4508

Revised- 10/15/10

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. By making the MSDS available, NPK LLC, DBA NPK Industries does not make any express or implied warranty (including any warranty of merchantability or fitness for a particular purpose) regarding the MSDS, its accuracy or the product to which it relates. Anyone using this information agrees that NPK Industries shall not be held liable (based on its negligence or otherwise) for any personal injury or other damage relating to, or arising from such use, including direct, incidental, or consequential damage and such user agrees to indemnify NPK Industries for any claims arising out of its use.
All Natural Leaf Polish

Source
Neem oil is pressed from the seed of the neem tree (Azadiracta indica Juss). This tree, native to eastern India and Burma, is known by several names including “village pharmacy”, “cornucopia”, “wonder tree”, and “the veritable gold mine”. Neem leaves, stems, seeds and oil have been used for medicinal and other purposes in India for more than 4,000 years. In fact, its Sanskrit name, arishta, means “reliever of sickness”.

Natural Leaf Polish
Neem oil leaves a natural shine on leaves without clogging stomata that leaves need to take in carbon dioxide and release oxygen and water vapor essential to the basic functioning of the photosynthesis process. Many of the glossy leaf polishes, which give an unnatural appearance to leaves, actually interfere with these natural transpiration processes.

Directions for Use
Mix 1 1/2 teaspoons of neem oil per quart of water (1 oz per gallon) to make a spray mix. Add about 1/2 teaspoon (2 tsp per gallon) Dyna-Gro Pro-TeKt, mild liquid dish soap or other surfactant to get the oil to emulsify in water. Warm or hot tap water will make this process easier. Put this mixture in a trigger spray bottle or other sprayer, shaking well before each use to get the oil in suspension. Since many find the smell of neem oil unpleasant, vanilla extract or peppermint oil can be used to mask the scent. You may also use Dr. Bronner’s Soap® with peppermint oil already mixed to accomplish both aims, emulsifying and masking the scent.

Spray on leaves until the mixture runs off to wash dust and dirt from leaves. Then allow the mixture to dry leaving a natural appearing semi gloss look on the leaves. Leaves may be cleaned and polished in this manner as often as twice a month if necessary.
All Natural Leaf Polish
continued

Product Safety

Because neem products have been and are being used for human consumption and medication, exposure to neem in the process of treating plants with neem oil poses no threat to humans or other higher animals. Neem biodegrades in a matter of weeks when exposed to sunlight or in soil.

In EPA testing, establishment of an LD-50 proved impossible as azadirachtin, one of more than 90 organic compounds present in neem oil, was asymptomatic at all levels tested. Accordingly, there are no reentry or residual restrictions associated with the use of neem oil.

Other Benefits

Dyna-Gro Nutrition Solutions® makes no claims for human health or horticultural benefits from neem oil.

Dyna-Gro Nutrition Solutions now has pure, pressed neem oil available in sizes for home users, the commercial nurserymen and interiorscape professionals.

For information on the full line of Dyna-Gro Nutrition Solutions, visit our website at www.dyna-gro.com or call 800-DYNA-GRO (396-2476) / 510-233-0254 for a free catalog.
Trade Name/Synonym: Pure Neem Oil Organic Leaf Polish
Date Prepared: June 1, 2009
Chemical Name: 100% Cold Pressed Neem Oil
Formula: Extracts of Neem Seeds

Section 1: Manufacturer or Supplier
Dyna-Gro Nutrition Solutions, 2775 Giant Road, Richmond, CA 94806, (800) 396-2476 Emergency (510) 233-0254

Section 2: Hazardous Ingredients
Contains no hazardous mixtures

Section 3: Physical Data & Ingredients
Physical State at STP: Liquid
Appearance: Brown
Odor: Garlic
Boiling Point: > 392° F
Melt/Freeze Point: 55° F
pH: 6.5 – 7.5
Specific Gravity: 0.9137
Solubility in Water: Slightly Soluble
Vapor Pressure at 20° C: < 1.33 EE-5 Pa
Vapor Density: Greater than air

Exposure limits in air:

<table>
<thead>
<tr>
<th>Chemical or Common Name</th>
<th>%</th>
<th>CAS#</th>
<th>ACGIH TLV: OHSA PEL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neem Oil</td>
<td>100%</td>
<td>8002-65-1</td>
<td>Not Established</td>
</tr>
</tbody>
</table>

Section 4: Fire & Explosion Hazard Data
Flash Point: > 239° F
Extinguishing Media to Use: Dry Chemicals, CO2, Water or Water Based Foam
Special Fire Fighting Procedures: None
Unusual Fire & Explosion Risk: None

Section 5: Reactivity Hazard Data
Stability: Stable
Incompatibility: None Noted
Hazardous Decomposition: None
Hazardous Polymerization: None

Section 6: Health Hazard Data
Effects of Over-Exposure: None Noted.
Health Hazards: Acute: May cause mild irritation to eyes and skin.
Chronic: Repeated skin exposure may cause mild sensitization.

Emergency First Aid:
If Swallowed: Under 1 ounce does not have any harmful effects. For larger amounts, do not induce vomiting. Drink one or two glasses of water. Never give anything by mouth to an unconscious person. Call a physician.
Skin Exposure: Wash with soap and water. Get medical attention if irritation persists.
Eye Exposure: Flush eyes with water for 15 minutes. Call a physician.
If Inhaled: Remove to fresh air. Get medical attention if irritation persists.
Section 7: Spill or Leak Procedures

Environmental Hazard: Do not apply directly to bodies of water. This product is toxic to bees exposed to direct treatment.

Steps to take if Spill Occurs: Ventilate the area. Absorb liquid and scrub the area with detergent and water. Avoid runoff into storm sewers and ditches leading to waterways.

Waste Disposal Method: Dispose of all waste according to local, state and federal regulations. Mix with water and dispose of in approved landfill.

Section 8: Special Protection Information

Respiratory Protection: No special requirements.

Ventilation: Adequate ventilation

Eye Protection: Safety goggles

Protective Gloves: Rubber

Section 9: Handling & Storage Conditions

Storage Temperature (Min./Max.): 60° F / 95° F

Shelf Life: Stable under normal storage conditions up to two years.

Special Sensitivity: Keep from freezing.

Handling Precautions: Do not drink, get in eyes, on skin or on clothing. Use in well ventilated area. Wash thoroughly with soap and water after handling.

Storage Precautions: Do not keep near flame. Store in a cool, dry place.

The information contained herein is provided in good faith and is believed to be correct and equivalent to OSHA Form 174, as of the date hereof, but is issued without guarantee. Since conditions of use are beyond our control, user assumes all responsibility and risk.
Product
Dyna-Gro Pure Neem Oil Organic Leaf Polish

Company
Dyna-Gro
David Neal
2775 Giant Rd
Richmond, CA 94806

Status
Allowed

Category
NOP: Neem and Neem Derivatives - natural

Issue date
08-Oct-2013

Product number
dyn-4466

Class
Crop Management Tools and Production Aids

Expiration date
01-Dec-2017

Restrictions
Not applicable.

Executive Director
Peggy Mians

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the current OMRI Standards Manual®. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Products List® at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator’s responsibility to properly use the product, including following any restrictions.

Organic Materials Review Institute
P.O. Box 11558, Eugene, OR 97440-3758, USA
541.343.7600 • fax 541.343.8971 • info@omri.org • www.omri.org
Insect Killing Soap
WITH SEAWEED EXTRACT

† Kills Aphids, Mealybugs, Mites, Whiteflies
and other listed pests.
See Back Panel
† For Indoor & Outdoor Uses

ACTIVE INGREDIENT.......................... BY WT.
Potassium Salts of Fatty Acids............. 2.00%
OTHER INGREDIENTS.......................... 98.00%
TOTAL........................................... 100.00%

KEEP OUT OF REACH OF CHILDREN
See back panel for additional
Precautionary Statements and First Aid.

MANTENGASE ALEJADO DEL ALCANCE DE LO NIÑOS
Vea las advertencias adicionales
y los primeros auxilios al dorso.

NET CONTENTS 32 FL. OZ. (946 ml)
Woodstream Corp. and its subsidiaries will not accept liability for damage or injury resulting from misuse. For information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

Distributed by: Sater®, Inc., a wholly-owned subsidiary of Woodstream Corporation

69 N. Louest Street
Lititz, PA 17543
1-800-800-4819 • 717-628-2125
EPA Reg. No. 42697-59
EPA, Est. No. 063416-MN-301
Look for other Sater® Brand products at www.saterbrand.com

NET CONTENTS 32 FL. OZ. (946 mL)

© Copyright 2004 Woodstream Corp.
Material Safety Data Sheet

Woodstream Corporation
69 North Locust Street
Lititz, PA 17543

MSDS No: 578

Domestic Emergency Phone: 800-424-9300
International Emergency Phone: 703-527-3887
Information Phone: 800-800-1819
Intl Info Phone: 717-626-2125

SECTION I: MATERIAL IDENTIFICATION

Product Number/Size: 5110 32 Ounce (fluid)
Trade Name: Safer® Brand Insect Killing Soap with Seaweed Extract II
Also Known As: Organic Insect Killing Soap w/ Seaweed
Description: Liquid Insecticide RTU
Chemical Composition: 2.0% Potassium Salts of Fatty Acids
Regulatory Licenses: EPA Reg. No. 42697-59

SECTION II: INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Ingredient(s)</th>
<th>% BY WT</th>
<th>CAS #</th>
<th>OSHA/TWA</th>
<th>PEL/STEL</th>
<th>ACGIH/TWA</th>
<th>TLV/STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Salts of Fatty Acids</td>
<td>&lt;2.0</td>
<td>N/A</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>&lt;1.0</td>
<td>64-17-5</td>
<td>1900 mg/m 3</td>
<td>NE</td>
<td>1880 mg/m 3</td>
<td>NE</td>
</tr>
</tbody>
</table>

SECTION III: PHYSICAL DATA

Boiling Point: Not Determined
Vapor Pressure (mm Hg): Not Determined
Vapor Density (AIR=1): Not Determined
Bulk Density: 8.25 lb/gal
Freezing Point: Not Determined
Solubility in Water: Soluble
Appearance: Milky Brown Liquid
Viscosity: 0.5 cSt.
Odor: Lard odor
Specific Gravity (Water=1): 0.99
Percent, Volatile by Volume %: Not Determined
Evaporation Rate (Xylene=1): Not Determined
Physical State: Liquid
pH: 10.1

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point (method): >200 F
Autoignition Temp.: Not Applicable
Flammable LEL: Not Determined
Flammable UEL: Not Determined
Hazardous Products of Combustion: None
NFPA Health Rating: 1
NFPA Fire Rating: 1
NFPA Reactivity Rating: 0
Extinguishing Material: CO2, dry chemical, foam, water

SECTION V: HEALTH HAZARD DATA

General Statement: Material is not considered to be hazardous per 29 CFR 1910.1200.
Occupational Exposure Limit: See Section II
Effects of Over Exposure: None Expected
Carcinogenicity: None listed per OSHA, NTP, or IARC.
Chronic Effects: Ethanol has been shown to be a developmental toxin from chronic ingestion; such effects are not anticipated from appropriate use of this product.
Rec. Exp. Limits: See Section II
Potential Health Effects: None Expected
Acute Oral: >5000 mg/kg
Acute Dermal: >5000 mg/kg
Acute Inhalation: >2 mg/liter
Eye Irritation: Not an irritant
Skin Irritation: Not an irritant
Sensitization: Not a sensitizer
SECTION VI: REACTIVITY DATA

Stability: Stable
Conditions to avoid: Excessive Heat
Materials to avoid: Concentrated mineral supplements (fertilizers), strong oxidizers, acids
Hazardous Decomposition: Will not occur
Conditions to avoid: None
Hazardous Polymerization: Will not occur
Conditions to avoid: None

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: Rinse with abundant water and mop up
Waste Disposal Method: Dispose in accordance with local, provincial and national regulations.
Product Disposal Method: PESTICIDE DISPOSAL: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility. CONTAINER DISPOSAL: If Empty: Do not reuse this container. Place in trash or offer for recycling if available. If Partly Filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection: In typical applications no engineering controls should be needed; if industrial hygiene surveys show that occupational exposure limits may be exceeded, use NIOSH approved respirator with organic vapor/dust/mist cartridges.
Protective Gloves: Protective gloves (nitrile) recommended
Eye Protection: Recommended to avoid splashing of material directly into eyes
Protective Clothing: Not Needed
Ventilation: Not Needed
Other Protective Equipment: Not Needed
Protection Note: Personal protection information provided in this Section is based upon general information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

SECTION IX: SPECIAL PRECAUTIONS

Storage and Handling: PESTICIDE STORAGE: Store only in a cool, dry area inaccessible to children and pets. Protect from freezing and heat. Keep container tightly closed to prevent evaporation. Do not contaminate water, food or feed by storage and disposal.
Other Precautions: Store away from heat, out of reach of children. Do not contaminate water, food or feed by storage or disposal. Do not reuse container.
Precaution Note: None

SECTION X: ECOLOGICAL INFORMATION

Ecotoxicity: May be hazardous to aquatic invertebrates. Do not apply directly to water; do not contaminate water by cleaning of equipment or disposal of wash waters.
Environmental Fate: Not persistent
SECTION XI: TRANSPORTATION INFORMATION

DOT HAZARD DESCRIPTION

DOT Proper Shipping Name: Not Regulated
Identification Number: None
DOT Hazard Class/Division: None
Packaging Group: None
Packaging Instructions: Not Regulated
Special Instructions: Not Regulated
Placard: None
Emergency Response Guide#: Not Regulated
US Surface Freight Class: See NMFTA Manual

IATA CLASSIFICATION

IATA Proper Shipping Name: Not Regulated
IATA Identification Number: None
IATA Hazard Class/Division: Not Regulated
Packaging Group: None
IATA Bulk Packaging Inst: Not Regulated
IATA Shipping Notes: Not Regulated

IMO CLASSIFICATION

IMO Proper Shipping Name: Not Regulated
IMO Identification Number: None
IMO Hazard Class/Division: Not Regulated
Packaging Group: None
IMO Shipping Notes: Not Regulated
IMO Bulk Packaging Inst: Not Regulated
IMO Stowage Category: Not Regulated

SECTION XII: REGULATORY INFORMATION

SARA Title III: Not Regulated
SARA Product Classification: Reporting not required unless TPQ exceeded in inventory
Acute: N/A
Chronic: N/A
Fire: N/A
Reactivity: N/A
Pressure Generating: Not Pressure Generating
311/312 Hazard Categories: Not Subject
313 Reportable Ingredients: None Listed
TSCA Regulatory: In the U.S.A. states such as Pennsylvania, New Jersey, California, Vermont, Massachusetts and Rhode Island may all have components of this product listed; consult specific state regulatory requirements for additional information.
State Regulations: None Listed
Proposition 65 Statement: None Listed
European Classification:

SECTION XIII: OTHER INFORMATION

Memo: While this information and recommendations set forth are believed to be accurate as of the date hereof, Woodstream Corp. makes no warranty with respect hereto and disclaims all liability from reliance thereon.

Date MSDS Prepared: 7/5/2011
Supercedes Date: 3/8/2004
Contact: Mark Mongiovi
Title: Regulatory Affairs
Product
Safer® Brand End All™ Insect Killer

Company
Woodstream Corporation
Mark Mongiovi
69 N Locust Street
Lititz, PA 17543

Status
Allowed with Restrictions

Category
NOP: Soap – pesticide

Issue date
03-Aug-2009

Product number
wsc-1484

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Sep-2017

Restrictions
May be used as an algicide/demosser, herbicide or insecticide if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices. When used as an herbicide may only be used for farmstead maintenance (roadways, ditches, right of ways, building perimeters) and ornamental crops.
GARLIC BARRIER AG+

INSECT REPELLENT

Keep insects from getting on plants and trees.
Applied product becomes odorless in minutes.
Keep Out of Reach of Children
Avoid contact with eyes. If in the eyes, flush with plenty of water.

ACTIVE INGREDIENTS:
Garlic Juice............................................. 99.3%

INERT INGREDIENTS:
Citric Acid (from corn).......................... .5%
Potassium Sorbate (to preserve freshness) .2%
TOTAL:.................................................. 100%

Net Weight 9.25 lbs/4.2 Kilos     Vol: 128OZ/3.79L
MIXING DIRECTIONS
Shake container well or stir contents thoroughly before mixing. Mix 1 gallon AG+ to 99 gallons water or 1 gallon AG+ to 50 gallons water (if infestation exists). After mixing concentrate, agitate again before spraying to prevent settling.

APPLICATION DIRECTIONS
TIMING: Apply as a preventative treatment prior to insect infestation. Make the first application at foliar emergence and repeat on a 10-14 day spray schedule to maintain the repellency effect.

METHOD OF APPLICATION: Garlic Barrier may be applied by air or ground equipment.
RATE OF APPLICATION: Set equipment to thoroughly wet foliage. Spray over 10 acres at rate of 10 gallons per acre for 1:99 mixture. Spray at rate of 5 gallons per acre for 1:50 mixture. If spraying orchards (trees), use any amount water but 25.5 ounces per acre of AG+ mixed in water. Garlic Barrier is compatible with most surfactants and conventional pesticides. The most effective ambient temperature range for application is 60 to 85 degrees F.
AFTER TASTE: AG+ will impart no garlic taste to food crops.

STORAGE AND DISPOSAL
STORAGE: The optimum storage temperature is between 35 and 90 degrees F to prevent product degradation. Do not freeze. Do not store in direct sunlight. Do not use or store near heat, open flame or hot surfaces.
DISPOSAL: Rinse bottle and present for recycling.

EFFECTIVE FOR REPPELLING THE FOLLOWING:
ANIMALS, BIRDS AND MORE - Armadillos, Deer, Field Mice, Fleas, Geese, Gnats, Mosquitos, Rabbits and Ticks.
BULB VEGETABLES - (Garlic, Leek, Onion, and Shallot): For repelling Armyworms, Leafminers, Maggots, Thrips, and Wireworms.
CEREAL GRAINS - (Barley, Buckwheat, Corn, Millet, Oats, Popcorn, Rice, Rye, Sorghum, Wheat, and Wild Rice): For repelling Aphids, Armyworms, Beetles, Borers, Chinch Bugs, Cutworms, Earworms, Grasshoppers, Maggots, Mites, Rootworms, White Grubs, and Wireworms.
CITRUS - (Calamondin, Citron, Grapefruit, Hybrids, Kumquats, Lemons, Limes, Oranges, Pummelo, Satsuma Madarin, Tangelos and Tangerines): For repelling Aphids, Cutworms, Leafrollers, Mites, Scale, Thrips, and Whiteflies.
COTTON - For repelling Aphids, Armyworms, Bollworms, Boll Weevils, Cotton Leaf Perforator, Cutworms, Fleahoppers, Loopers, Lygus Bugs, Mites, Saltmarsh Caterpillar, Thrips, Webworms, and Whiteflies.

This product has not been registered by the U.S. Environmental Protection Agency. Garlic Research Labs Inc. represents that this product qualifies for exemption from registration under the Federal Insecticide, Fungicide and Rodenticide Act.
Manufactured by: Garlic Research Labs
624 Ruberta Avenue
Glendale, California 91201-2335
EMAIL: Garlic@Loop.Com
Web Address: WWW.GarlicBarrier.Com
Toll Free Phone: 800-424-7990
Made in USA
CUCURBIT CROPS – (Cucumbers, Cantaloupe, Casaba Melons, Gherkins, Gourds, Honeydew Melons, Mango Melons, Muskmelons, Pumpkins, Summer and Winter Squash, and Watermelons): For repelling Aphids, Beetles, Leaffoppers, Leaffliners, Loopers, Mites, Thrips, Whiteflies, and Wireworms.


FRUITING VEGETABLES – (Bell Peppers, Chile Peppers, Cooking Peppers, Eggplant, Ground Cherry, Pepinos, Pimentos, Sweet Peppers, Tomatillo, and Tomatoes): For repelling Aphids, Beetles, Cutworms, Fruitworms, Hornworms, Leaffliners, Loopers, Mealybugs, Mites, Plant Bugs, Whiteflies, and Wireworms.


KIWI – For repelling Japanese Beetles.


ORNAMENTALS – (Flowers, Shrubs, and Trees): For repelling Aphids, Bagworms, Beetles, Borers, Chafer, Curculio, Cutworm, Gypsy Moths, Inchworms, Leaffliners, Leaffliners, Maggots, Mealybugs, Mites, Plant Bugs, Sawflies, Scale, Spittlebugs, Webworms, and Whiteflies.

PEANUTS – For repelling Aphids, Armyworms, Earworms, Cutworms, Leaffliners, Mites, Rootworms, and Thrips.

POME FRUIT TREES – (Apples, Crabapples, Mayhaws, Pears, Quince): For repelling Aphids, Appleworms, Casebearers, Codling Moths, Curculios, Leaffliners, Leaffliners, Maggots, Mealy Bugs, Mites, Plant Bugs, Psylla, Sawflies, Scale.


STONE FRUIT TREES – (Apricots, Cherries (sweet and sour), Nectarines, Peaches, Plums): For repelling Aphids, Beetles, Borers, Fruit Flies, Fruit Moths, Leaffliners, Mites.

SUGARCANE – For repelling Borers, Delphacid, Lacebugs, Leaffliners, Mites, Spittlebugs, White Grubs, and Wireworms.

SUNFLOWERS – For repelling Aphids, Armyworms, Beetles, Caterpillars, Cutworms, Grasshoppers, Maggots, Midge, Moths, Thrips, and Weevils.


TURFGRASS – (Bahiagrass, Bentgrass, Bermuda Grass, Bluegrass, Buffalo Grass, Catppedegrass, Fescue, Paspalum, Red Top, Rye Grass, St. Augustine, and Zoysia grass): For repelling Aphids, Ants, Armyworm, Atenlus, Beetles, Billbugs, Chafer, Chinch Bugs, Crane Fly, Cutworm, Earwigs, Ground Pearls, Grubs, Leafflower, Mites, Mole Cricket, Spittlebugs, Webworms and Weevils.
**Material Safety Data Sheet**

May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200 Standard must be consulted for specific requirements.

**IDENTITY (As Used on Label and List)**

<table>
<thead>
<tr>
<th>GARLIC BARRIER AG</th>
</tr>
</thead>
</table>

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

**Section I**

- **Manufacturer's Name**
  - Garlic Research Labs
- **Address (Number, Street, City, State, and Zip Code)**
  - 624 Ruberta Avenue
  - Glendale, CA 91201-2335
- **Emergency Telephone Number**
  - 1-800-424-7990
- **Telephone Number for Information**
  - 818-247-9600
- **Date Prepared**
  - October 24, 1999
- **Signature of Preparer (optional)**

**Section II – Hazardous Ingredients/Identity Information**

<table>
<thead>
<tr>
<th>Hazardous Component(s) (Specific Chemical Identity: Common Name(s))</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits Recommended</th>
<th>c/o (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allium Sativum extract / Garlic Juice</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

**Section III – Physical/Chemical Characteristics**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity (H2O = 1)</td>
<td>1.1</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg.)</td>
<td>N/A</td>
</tr>
<tr>
<td>Melting Point</td>
<td></td>
</tr>
<tr>
<td>Vapor Density (AIR = 1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Slight</td>
<td></td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Yellowish sand color. Strong garlic odor.</td>
</tr>
</tbody>
</table>

**Section IV – Fire and Explosion Hazard Data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point (Method Used)</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td></td>
</tr>
<tr>
<td>LEL</td>
<td>N/A</td>
</tr>
<tr>
<td>UEL</td>
<td>N/A</td>
</tr>
<tr>
<td>Extinguishing Media</td>
<td>Non flammable</td>
</tr>
<tr>
<td>Special Fire Fighting Procedures</td>
<td>None</td>
</tr>
<tr>
<td>Unusual Fire and Explosion Hazards</td>
<td>None</td>
</tr>
</tbody>
</table>
### Section V – Reactivity Data

<table>
<thead>
<tr>
<th>STABILITY</th>
<th>Unstable</th>
<th>Conditions to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable</td>
<td>X</td>
<td>Prolonged skin contact, may cause slight irritation</td>
</tr>
</tbody>
</table>

#### Incompatibility (Materials to Avoid)
None

#### Hazardous Decomposition or Byproducts
None

#### Hazardous Polymerization
May Occur

<table>
<thead>
<tr>
<th>Conditions to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will Not Occur</td>
</tr>
</tbody>
</table>

### Section VI – Health Hazard Data

<table>
<thead>
<tr>
<th>Route(s) of Entry:</th>
<th>Inhalation?</th>
<th>Skin?</th>
<th>Ingestion?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

#### Health Hazards (Acute and Chronic)
None known.

#### Carcinogenicity
NTP? | IARC Monographs? | OSHA Regulated?
No | No | No

#### Signs and Symptoms of Exposure
If in direct contact, slight skin irritation may occur.

#### Medical Conditions
Generally Aggravated by Exposure
None

#### Emergency and First Aid Procedures
If in eyes or on skin, flush with plenty of water.

### Section VII – Precautions for Safe Handling and Use

#### Steps to Be Taken in Case Material Is Released or Spilled
Wash area with water and sweep away. Product is biodegradable.

#### Waste Disposal Method
Place in containers and take to waste disposal center.

#### Precautions to Be Taken in Handling and Storing
Store in cool dry place.

#### Other Precautions
None.

### Section VIII – Control Measures

#### Respiratory Protection (Specify Type)
None

#### Ventilation
- Local Exhaust: N/A
- Mechanical (General): N/A

#### Protective Gloves
Yes | Eye Protection | Goggles only.

#### Other Protective Clothing or Equipment
Long sleeve shirts and long pants and high top shoes

#### Work/Hygienic Practices
Wash thoroughly after handling and applying.
For use as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.
## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

- **Product form**: Mixture
- **Product name**: Hydrogen Peroxide, 3% w/w
- **Product code**: LC15450

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: For laboratory and manufacturing use only.

### 1.3. Details of the supplier of the safety data sheet

- **LabChem Inc**
  - Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
  - Zelienople, PA 16063 - USA
  - T 412-826-5230 - F 724-473-0647
  - info@labchem.com - www.labchem.com

### 1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 or 011-703-527-3887

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**
- Skin Irrit. 2 H315
- Eye Dam. 1 H318

### 2.2. Label elements

**GHS-US labelling**

- Hazard pictograms (GHS-US): ![GHS05](image)

- **Signal word (GHS-US)**: Danger

- **Hazard statements (GHS-US)**: H315 - Causes skin irritation
  - H318 - Causes serious eye damage

- **Precautionary statements (GHS-US)**:
  - P264 - Wash exposed skin thoroughly after handling
  - P280 - Wear protective gloves, eye protection
  - P302+P352 - IF ON SKIN: Wash with plenty of soap and water
  - P305+P351+P338 - IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
  - P310 - Immediately call a POISON CENTER or doctor/physician
  - P332+P313 - If skin irritation occurs: Get medical advice/attention
  - P362 - Take off contaminated clothing and wash before reuse

### 2.3. Other hazards

Other hazards not contributing to the classification: None under normal conditions.

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

Full text of H-phrases: see section 16

### 3.2. Mixture
Hydrogen Peroxide, 3% w/w
Safety Data Sheet

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries after skin contact: Causes skin irritation.

Symptoms/injuries after eye contact: Causes serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
No additional information available

5.3. Advice for firefighters
Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Protective equipment: Safety glasses. Gloves.

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
Hydrogen Peroxide, 3% w/w
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Hygiene measures: Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep only in the original container in a cool, well ventilated place away from: incompatible materials, combustible materials. Keep container closed when not in use.


Incompat bio materials: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Hydrogen Peroxide, 30-35% w/w (7722-84-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
</tr>
<tr>
<td>USA ACGIH</td>
</tr>
<tr>
<td>USA OSHA</td>
</tr>
<tr>
<td>USA OSHA</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.

Personal protective equipment: Avoid all unnecessary exposure.
Hand protection: Wear protective gloves.
Eye protection: Chemical goggles or safety glasses.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: Wear appropriate mask.
Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Colourless.</td>
</tr>
<tr>
<td>Odour</td>
<td>None.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Self ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
**Hydrogen Peroxide, 3% w/w**

**Safety Data Sheet**

Explosive limits: No data available

9.2. Other information

No additional information available

**SECTION 10: Stability and reactivity**

10.1. Reactivity

No additional information available

10.2. Chemical stability

Unstable on exposure to light.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials


10.6. Hazardous decomposition products

Oxygen.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

**Acute toxicity**

Not classified

<table>
<thead>
<tr>
<th>Hydrogen Peroxide, 30-35% w/w (7722-84-1)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (oral) 500,000 mg/kg bodyweight</td>
<td></td>
</tr>
<tr>
<td>ATE (gases) 4500.0 ppmV/4h</td>
<td></td>
</tr>
<tr>
<td>ATE (vapours) 11.000 mg/l/4h</td>
<td></td>
</tr>
<tr>
<td>ATE (dust/mist) 1.500 mg/l/4h</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water (7732-18-5)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat ≥ 90000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye damage.

Respiratory or skin sensitisation: Not classified.

Germ cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

**Hydrogen Peroxide, 30-35% w/w (7722-84-1)**

IARC group 3 - Not classifiable

Reproductive toxicity: Not classified.

Specific target organ toxicity (single exposure): Not classified.

Specific target organ toxicity (repeated exposure): Not classified.

Aspiration hazard: Not classified.

Potential Adverse human health effects and symptoms: Based on available data, the classification criteria are not met.

Symptoms/injuries after skin contact: Causes skin irritation.

Symptoms/injuries after eye contact: Causes serious eye damage.

Likely routes of exposure: Inhalation, Skin and eye contact.

**SECTION 12: Ecological information**

12.1. Toxicity

No additional information available.
Hydrogen Peroxide, 3% w/w
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Component</th>
<th>Persistence and degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide, 3% w/w</td>
<td>Not established.</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Component</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide, 3% w/w</td>
<td>Not established.</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT
No dangerous good in sense of transport regulations

Additional information
Other information: No supplementary information available.

ADR
Transport document description:

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide, 3% w/w</td>
<td>Not listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Hydrogen Peroxide, 30-35% w/w (7722-84-1)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.2. International regulations

CANADA

<table>
<thead>
<tr>
<th>Component</th>
<th>WHMIS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide, 3% w/w</td>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Uncontrolled product according to WHMIS classification criteria</td>
</tr>
</tbody>
</table>
Hydrogen Peroxide, 3% w/w
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

15.2.2. National regulations

Water (7732-18-5)
Not listed on the Canadian Ingredient Disclosure List

15.3. US State regulations
No additional information available

SECTION 16: Other information

Other information = None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Inhalation)</th>
<th>Acute toxicity (inhal.), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Ox. Liqu. 1</td>
<td>Oxidising Liquids, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation, Category 1A</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>H271</td>
<td>May cause fire or explosion; strong oxidiser</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
</tbody>
</table>

NFPA health hazard: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard: 0 - Materials that will not burn.

NFPA reactivity: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

NFPA specific hazard: OX - This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.

HMIS III Rating
Health: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability: 0 Minimal Hazard
Physical: 1 Slight Hazard
Personal Protection: B

SOS US (GHS HazCom 2012)

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc. assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.

02/17/2014 EN (English) 6/6
SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: GRANDEVO® (synonym: MBI-203 DF)
REGISTRATION NO: 84059-17
MANUFACTURER: Marrone Bio Innovations
ADDRESS: 2121 Second Street, Suite B-107 Davis CA, 95618
EMERGENCY PHONE: INFOTRAC Chemical Response System
US and Canada 1-800-535-5053 (24 hours)
International 1-352-323-3500 (24 hours)
OTHER CALLS: Marrone Bio Innovations 530-750-2800 (9am to 5 pm PST)
FAX PHONE: Marrone Bio Innovations 530-750-2808
PRODUCT USE: Bio-based Insecticide/ bio-protectant

SECTION 2: HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION: This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

EMERGENCY OVERVIEW: Potential Irritant

HAZARD SYMBOLS:
  Pictogram

.signal word Warning

HAZARD STATEMENT: This product is potentially irritating to respiratory tract, eyes and skin for some individuals.

  H317  May cause an allergic skin reaction.
  H335  May cause respiratory irritation

PRECAUTIONARY STATEMENTS

  P261  Avoid breathing fume/gas/mist/vapors/spray
  P281  Use personal protective equipment as required.
  P284  Wear respiratory protection

POTENTIAL ROUTES OF ENTRY: Oral, eye, and inhalation.
SAFETY DATA SHEET

CARCINOGENICITY:

OSHA: Not listed    ACGIH: Not listed    NTP: Not listed.    IARC: Not listed

Physical State: Powder    Odor: Fruity    Color: Dark brown

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

ACTIVE INGREDIENT:

Chromobacterium subtsugae strain PRAA4-1

CAS NO. None    % WT 30    EXPOSURE LIMITS None Established

OTHER INGREDIENTS:

70.0 % inert, non-reactive.

SECTION 4: FIRST AID MEASURES

INHALATION: Remove person to fresh air. If the person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment.

EYES: Hold eye open and rinse slowly and gently with water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Do not use an eye ointment. Call poison control center or doctor for treatment advice.

SKIN: Remove contaminated clothing. Rinse skin immediately with plenty of water for at least 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or physician. Do not give anything by mouth to an unconscious person.

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, (% BY VOLUME)

UPPER: Not applicable.
LOWER: Not applicable.

FLASH POINT: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

NFPA HAZARD CLASSIFICATION

HEALTH: 0    FLAMMABILITY: 0    REACTIVITY: 0

HMIS HAZARD CLASSIFICATION

HEALTH: 0    FLAMMABILITY: 0    REACTIVITY: 0
SAFETY DATA SHEET

EXTINGUISHING MEDIA: Use extinguishing media appropriate for the surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIO SH (approved or equivalent) and full protective gear.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

HAZARDOUS DECOMPOSITION PRODUCTS: None

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Wear suitable protection such as a dust mask, long-sleeved shirt, pants, waterproof gloves and shoes with socks. Carefully mop or sweep up spill and place in a closed container for disposal. Dispose of in accordance with applicable local ordinances. Prevent run-off from being released into the environment.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store in the closed, original container in a well-ventilated area out of direct sunlight. Keep containers closed when not in use. Empty container completely and dispose of in accordance with all applicable federal, state and local environmental regulations.

OTHER PRECAUTIONS: No special precautions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Spill controls and dust control apparatus should be provided for working with large quantities.

VENTILATION: No TLV assigned. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and aerosols below the exposure levels. Ensure that eyewash stations and safety showers are proximal to the work-station location.

RESPIRATORY PROTECTION: Use a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95.

EYE PROTECTION: Safety goggles or glasses with side shields advisable when handling dry powder.

SKIN PROTECTION: Wear gloves made of Latex or other impervious material.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Clothing to prevent prolonged skin contact as needed such as long-sleeved shirt, long pants and shoes with socks.

WORK HYGIENIC PRACTICES: Wash any contamination from skin or eyes immediately. Wash hands and exposed skin before eating, drinking, smoking, after work or using the toilet.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Powder
COLOR: Dark brown powder
ODOR: Fruity
pH: 7.0-8.5
DENSITY: Not determined
BOILING POINT: Not applicable
MELTING POINT: Not applicable
SOLUBILITY IN WATER: Dispersible in water
FLASH POINT: Not determined
EVAPORATION RATE: Not determined
FLAMMABILITY (SOLID, GAS): Not determined
UPPER FLAMMABILITY LIMITS: Not determined
LOWER FLAMMABILITY LIMITS: Not determined
VAPOR PRESSURE: Not determined
VAPOR DENSITY: Not determined
RELATIVE DENSITY: Not determined
SOLUBILITY IN OTHER SOLVENTS: Not determined
PARTITION COEFFICIENT: Not determined
AUTOIGNITION TEMPERATURE: Not determined
DECOMPOSITION TEMPERATURE: Not determined
KINEMATIC VISCOSITY: Not determined
DYNAMIC VISCOSITY: Not determined
EXPLOSIVE PROPERTIES: Not determined
OXIDIZING PROPERTIES: Not determined

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable.
INCOMPATIBILITY (MATERIAL TO AVOID): None known
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None known
HAZARDOUS POLYMERIZATION: Not known to occur
CONDITIONS TO AVOID (POLYMERIZATION): None

SECTION 11: TOXICOLOGICAL INFORMATION

WARNING: This product may be harmful if swallowed. This product may be harmful in contact with skin. This product may be harmful if inhaled.

ACUTE ORAL TOXICITY LD₅₀: >5000 mg/kg (rat). Category 4
ACUTE DERMAL TOXICITY LD₅₀: >5050 mg/kg (rat). Category 4
ACUTE INHALATION LC₅₀: >2.12 mg/L (rat). Category 4
EYE IRRITATION: Minimally irritating (rabbit). Category 4
SKIN IRRITATION: Minimally irritating (rabbit). Category 4
SKIN SENSITIZATION: Non-sensitizing (guinea pigs). Category 4
SECTION 12: ECOLOGICAL INFORMATION

This product is non-toxic or practically nontoxic (Category 4) to mammalian wildlife, beneficial insects and mites, and freshwater aquatic life in short-term studies. Long-term data is unavailable.

Avian Acute Oral Toxicity: Bobwhite quail. LD$_{50}$ >2000 mg/kg-bw. Non-toxic. Category 5

Toxicity to freshwater aquatic life: *Daphnia magna* (48-hour acute toxicity) EC$_{50}$ = 11 mg/L AI. Category 3

Bees and beneficial insects: Honeybees (*Apis mellifera* L.) Non-toxic. Category 4

In a federally approved study, GRANDEVO was found to be practically non-toxic to honeybees. This product has been evaluated for toxicity to non-target insects in a variety of bioassays and on a variety of crops under various normal growing conditions. However, testing all beneficial insects, in all situations, mixtures and combinations, is not feasible. Prior to treating entire crop where the release of beneficial insects serve as part of an Integrated Pest Management (IPM) program, consult with an extension specialist, a pest control advisor (PCA) or with the product manufacturer.

**For terrestrial uses only**: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

**Sensitive areas**: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals. Do not allow product to drift to blooming crops or weeds if bees are foraging. Minimize spray drift away from the target area to reduce effects to other non-target insects.

Bioconcentration potential: This material is not expected to bioconcentrate in organisms.

SECTION 13: DISPOSAL CONSIDERATIONS

Do not reuse containers. Dispose of in accordance with all applicable federal, state, and local environmental regulations.

SECTION 14: TRANSPORTATION INFORMATION

U.S. DOT: Not regulated

IATA DGR: Not regulated

IMDG: Not regulated

Freight Classification: Insecticide. See NMFTA code.
SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA: Exempt
CERCLA: Not applicable.

SARA TITLE III HAZARD CLASSIFICATION SECTIONS 311 AND 312:
Immediate (acute) Health: None
Delayed (chronic) Health: None
Fire: None
Sudden Release of Pressure: None
Reactivity: None

STATE REGULATIONS: None

INTERNATIONAL REGULATIONS: Not applicable.

SECTION 16: OTHER INFORMATION

NFPA HAZARD CLASSIFICATION
HEALTH: 0 FLAMMABILITY: 0 REACTIVITY: 0

HMIS HAZARD CLASSIFICATION
HEALTH: 0 FLAMMABILITY: 0 REACTIVITY: 0

SPECIAL HAZARDS: Not Determined

Date Issued: 25 Feb 2014
Revision Date: 0
Revision Note: New format

DISCLAIMER: IN NO EVENT SHALL MARRONE BIO INNOVATIONS BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES. THE DATA PROVIDED IS FOR GENERAL INFORMATION ONLY AND IS NOT INTENDED AS A COMPREHENSIVE GUIDE CONCERNING HAZARDS THAT MAY BE ASSOCIATED WITH THIS PRODUCT. USER ASSUMES ALL RESPONSIBILITY FOR FOLLOWING PROPER SAFETY PROTOCOL AND CONSULTING TRAINED PERSONNEL FOR CONTROL AND CONTAINMENT.
Active ingredient:
Chromobacterium subtsuga strain PRAA4-1 and spent fermentation media* .................................................. 30.00%
Other ingredients: ............................................................................................................................ 70.00%
Total: ........................................................................................................................................ 100.00%

*Contains not less than 1000 Cabbage Looper Killing Units (CLKU)/mg. Note: The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

EPA Reg. No.: 84059-17

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID

IF IN EYES:
• Hold eye open and rinse slowly and gently with water for 15–20 minutes.
• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
• Call a poison control center or doctor for treatment advice.

IF INHALED:
• Move person to fresh air.
• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
• Call a poison control center or doctor for further treatment advice.

IF SWALLOWED:
• Call a poison control center or doctor immediately for treatment advice.
• Have person sip a glass of water if able to swallow.
• Do not induce vomiting unless told to do so by the poison control center or doctor.
• Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING:
• Take off contaminated clothing.
• Rinse skin immediately with plenty of water for 15–20 minutes.
• Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-222-1222 for emergency medical treatment information.

Net Weight: 5 lb
PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear goggles or safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before use.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks
- protective eyewear

Mixer/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Follow the manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4–6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for “applicators and other handlers” and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should:
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handing this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS
This product is toxic to aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

This product is toxic to certain non-target terrestrial arthropods. Minimize spray drift away from target area to reduce effects to non-target insects.

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exemptions pertaining to the statements on this label about personal protective equipment (PPE) and the restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil or water is:

- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

**EXCEPTION:** If the product is soil incorporated or soil injected, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

**PRODUCT INFORMATION**

GRANDEVO® is a biological insecticide/miticide containing fermentation solids of *Chromobacterium subtsugae* strain PRAA4-1T for use on edible crops against the pests listed in the Directions for Use section. GRANDEVO® functions primarily as a stomach poison for use in the control or suppression of many foliar-feeding pests, including caterpillars, and certain coleopteran. GRANDEVO® has multiple effects, including reducing fecundity and oviposition, deterring feeding and acting as a stomach poison on Homoptera and Hemiptera, such as aphids, psyllids, whiteflies, *Lygus* and mealybugs, and on thrips and phytophagous mites infesting labeled crops or use sites. GRANDEVO® must be mixed with water and applied as a foliar spray with ground or aerial equipment equipped for conventional insecticide spraying or by chemigation.

GRANDEVO® can be used in the field or greenhouse for the control of any labeled pest.

**USE INSTRUCTIONS**

GRANDEVO® is a biological insecticide/miticide for use against listed insects and mites. Close scouting and early attention to infestations is highly recommended. For insects and mites, proper timing of application targeting new populations or recently hatched larvae and nymphs is important for optimal results. Applying GRANDEVO® when pest populations are low is recommended.

This product temporarily repels honeybees, for up to 4 to 6 days after spraying. When needed, time applications so that pollination is not disrupted.

For insects and mites, thorough coverage of infested plant parts is necessary for effective control. GRANDEVO® does not have systemic activity. For some crops, directed drop nozzles by ground machine are required.

Under heavy pest populations, apply a knockdown insecticide prior to or in a tank mix with GRANDEVO®, use the higher label rates, shorten the spray interval, and/or increase the spray volume to improve coverage.

Repeat applications at an interval sufficient to maintain control, depending upon plant growth rate, insect and mite activity, and other factors. If attempting to control an insect population with a single application, make the treatment when egg hatch is essentially complete but when larvae or nymphs are young and before economic damage occurs.

To enhance control, consider tank mixing with contact insecticides/miticides. Use the lower label rates of GRANDEVO® when populations are low and when tank mixing with other insecticides/miticides. Use the higher rates of GRANDEVO® when applied stand-alone, when populations are high or when egg numbers are high.

For hard-to-wet crops, consider using a spreader/sticker or adjuvant, which has been approved for targeted crop use, to enhance coverage and adhesion of GRANDEVO® to the crop.

GRANDEVO® has been evaluated for phytotoxicity on a variety of crops under various normal growing conditions. However, testing all crop varieties, in all mixtures and combinations, is not feasible. Prior to treating entire crop, test a small portion of the crop for sensitivity.
**GROUND AND AERIAL APPLICATION**

Apply GRANDEVO® in ground and aerial equipment with quantities of water sufficient to provide thorough coverage of infested plant parts. The amount of water needed per acre will depend upon crop development, weather, application equipment, and local experience.

Do not spray when wind speed favors drift beyond the area intended for use.

Avoiding spray drift is the responsibility of the applicator.

**Mixing directions**

**Important** – Do not add GRANDEVO® to the tank mix before introducing 3/4 of the desired amount of water. Add water to mix tank. Start the mechanical or hydraulic agitation to provide moderate circulation before adding GRANDEVO®. Add the desired volume of GRANDEVO® to the mix tank and continue circulation while adding the remainder of the water. Maintain circulation while loading and spraying. Do not mix more GRANDEVO® than can be used in 24 hours. Use a strainer no finer than 50 mesh in conventional spray systems.

**Spray volume**

For conventional air and ground applications, use at least 10 gallons of total volume per acre in water-based sprays.

**Tank mixing**

Do not combine GRANDEVO® in the spray tank with other pesticides, surfactants, adjuvants, or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective, and non-injurious under your use conditions. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

To ensure compatibility of tank mix combinations, they must be evaluated prior to use. To determine the physical compatibility of this product with other products, use a jar test. Using a quart jar, add the proportionate amounts of the products to one quart of water with agitation. Add dry formulations first, then flowables, and then emulsifiable concentrates last. After thoroughly mixing, let this mixture stand for 5 minutes. If the combination remains mixed or can be readily remixed, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

**AERIAL DRIFT REDUCTION INFORMATION**

**GENERAL:** Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Where states have more stringent regulations, they should be observed.

Do not apply directly to aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, ponds, estuaries, and commercial fish ponds).

**INFORMATION ON DROPLET SIZE:** Use only medium or coarser spray nozzles according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size. The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that will provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

**CONTROLLING DROPLET SIZE:** **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. **Pressure** – Do not exceed the nozzle manufacturer’s specified pressures. For many nozzle types, lower pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure. **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage. **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential. **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**BOOM WIDTH:** For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade.

**APPLICATION HEIGHT:** Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or crop canopy.
SWATH ADJUSTMENT: When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

WIND: Only apply this product if the wind direction favors on-target deposition. Do not apply when the wind velocity exceeds 15 mph. Drift potential is lowest between wind speeds of 2–10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS: Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

CHEMIGATION USE DIRECTIONS

Spray preparation
First, prepare a suspension of GRANDEVO® in a mix tank. Fill tank with ¾ of the amount of water for the area to be treated. Start mechanical or hydraulic agitation. Add the required amount of GRANDEVO®, and then the remaining volume of water. Then, set the sprinkler to deliver a minimum of 0.1 to 0.3 inch of water per acre. Start sprinkler and uniformly inject the suspension of GRANDEVO® into the irrigation water line so as to deliver the desired rate of GRANDEVO® per acre. Inject the suspension of GRANDEVO® with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing. GRANDEVO® is to be metered continuously for the duration of the water application. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not combine GRANDEVO® with other pesticides, surfactants, adjuvants, or fertilizers for application through chemigation equipment unless prior experience has shown the combination to be physically compatible, effective and non-injurious under your conditions of use.

General Requirements -
1) Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.
2) Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3) If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4) Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5) A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
Specific Requirements for Chemigation Systems Connected to Public Water Systems -
1) Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2) Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4) The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7) Do not apply when wind speed favors drift beyond the area intended for treatment.

Specific Requirements for Sprinkler Chemigation -
1) The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5) The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7) Do not apply when wind speed favors drift beyond the area intended for treatment.

Application Instructions for All Types of Chemigation -
1) Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues, may cause product to lose effectiveness or strength.
2) Determine the treatment rates as indicated in the directions for use and make proper dilutions.
3) Prepare a solution in the chemical tank by filling the tank with the required water and then adding product as required. Utilize agitation to keep solution in suspension.
APPLICATION RATES FOR SELECTED CROPS
For greenhouse applications on the crops and pests listed, use 1–3 pounds of GRANDEVO® in 100 gallons of water sprayed until just before point of runoff.

See specific application rates for each crop for additional details on greenhouse applications and for all other application types.

FOR USE ON THE FOLLOWING CROPS FOR CONTROL OF SPECIFIED INSECTS AND MITES:

<table>
<thead>
<tr>
<th>Pre-harvest Interval (PHI) = 0 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa (Hay and Seed), Hay and Other Forage Crops</td>
</tr>
<tr>
<td>1–3 pounds of GRANDEVO® per acre</td>
</tr>
<tr>
<td>2–3 pounds of GRANDEVO® per acre</td>
</tr>
</tbody>
</table>

Artichoke (Globe)

| 1–3 pounds of GRANDEVO® per acre | Armyworms, artichoke plume moth, loopers |
| 2–3 pounds of GRANDEVO® per acre | Aphids, whiteflies |

Asparagus

| 2–3 pounds of GRANDEVO® per acre | Aphids, armyworms, cutworms |

Bananas

| 2–3 pounds of GRANDEVO® per acre | Banana skipper |

Brassica (Cole) Leafy Vegetables
Broccoli, Broccoli Raab, Brussels Sprouts, Cabbage, Cauliflower, Cavalo Broccolo, Chinese Broccoli, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, and Rape Greens

| 1–3 pounds of GRANDEVO® per acre | Armyworms, beet armyworm, cabbage looper, cabbage webworm, cross-striped cabbageworm, cutworms, diamondback moth, imported cabbageworm, light brown apple moth |
| 2–3 pounds of GRANDEVO® per acre | Aphids, billbugs, leafhoppers, mites, plant bugs, thrips, whiteflies, yellow margined leaf beetle larvae – apply to newly hatched to 2nd instar. If adult beetles are also present, tank mix with a knockdown insecticide. |

Bulb Vegetables
Leek, Garlic, Onion (Bulb and Green), and Shallot

| 1–3 pounds of GRANDEVO® per acre | Armyworms, cross-striped cabbageworm, cutworms, diamondback moth, European corn borer, green cloverworm, Heliotis, hornworm, imported cabbageworm, leek moth, loopers, omnivorous leafroller, saltmarsh caterpillar, webworms |
| 2–3 pounds of GRANDEVO® per acre | Aphids, thrips |
Bushberries
Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Lingonberry, and Salal

1–3 pounds of GRANDEVO® per acre
Armyworms, cherry fruitworm, cranberry fruitworm, fireworms, leafrollers, loopers

2–3 pounds of GRANDEVO® per acre
Aphids, thrips

Canberries
Blackberry, Black and Red Raspberry, Loganberry, and Cultivars, Varieties and/or Hybrids of these

1–3 pounds of GRANDEVO® per acre
Armyworms, beet armyworm, bertha armyworm, green fruitworm, leafrollers, loopers, western raspberry fruitworm

2–3 pounds of GRANDEVO® per acre
Aphids, thrips

Cereal Grains
Barley, Buckwheat, Oats, Pearl Millet, Proso Millet, Rye, Sorghum (Milo), Triticale, and Wheat

1–3 pounds of GRANDEVO® per acre
Armyworms, corn earworm (headworm), southwestern corn borer, web worms

2–3 pounds of GRANDEVO® per acre
Aphids (including greenbug), chinch bugs, mites, thrips

Citrus Fruit
Grapefruit, Lemons, Limes, Oranges, and Tangerines

1–3 pounds of GRANDEVO® per acre
Citrus cutworm, citrus leafminer, fruittree leafroller, orangedog

2–3 pounds of GRANDEVO® per acre
Asian citrus psyllid, aphids, citrus blackfly, citrus red mite, citrus thrips, citrus whitefly, cloudy-winged whitefly, glassy-winged sharpshooter, mealybugs, six-spotted spider mite, Texas citrus mite, two-spotted spider mite

Corn (Field Corn, Sweet Corn, Popcorn, Corn Grown for Seed)

1–3 pounds of GRANDEVO® per acre
Armyworms, common stalk borer, corn earworm, European corn borer, lesser cornstalk borer, southwestern corn borer, webworms, Western bean cutworm

2–3 pounds of GRANDEVO® per acre
Chinch bugs, corn leaf aphid, mites, thrips

Cotton

1–3 pounds of GRANDEVO® per acre
Cotton bollworm, European corn borer, fall armyworm, loopers (soybean and cabbage), saltmarsh caterpillar, tobacco budworm, yellow-striped armyworms

2–3 pounds of GRANDEVO® per acre
Cotton aphid, cotton leafhopper, leafhoppers, Lygus, mites, silverleaf whitefly, thrips

Cranberry

2–3 pounds of GRANDEVO® per acre
Aphids, armyworms, brown spanworm, cranberry blossom weevil, cranberry fruitworm, cutworms, fireworms, leafrollers, loopers, mites, sparganothis fruitworm, thrips

Do not apply to flooded fields.
Cucurbit Vegetables
Cantaloupe, Cucumber, Edible Gourds, Muskmelon, Pumpkin, Watermelon, and Winter and Summer Squash

1–3 pounds of GRANDEVO® per acre
Armyworms, cabbage looper, corn earworm, cutworms, melonworm, pickleworm, rindworm complex

2–3 pounds of GRANDEVO® per acre
Aphid, mites, thrips, whiteflies

Fig

1–3 pounds of GRANDEVO® per acre
Navel orangeworm

2–3 pounds of GRANDEVO® per acre
Aphids, thrips

Fruiting Vegetables
Tomato, Pepper, Eggplant, Groundcherry, Pepino, Okra, and Tomatillo

1–3 pounds of GRANDEVO® per acre
Armyworms (including beet and yellow-striped), European corn borer, hornworms, loopers, saltmarsh caterpillar, tomato fruitworm, tomato pinworm, variegated cutworm

2–3 pounds of GRANDEVO® per acre
Aphids, Lygus, mites, pepper weevil, plant bugs, psyllids, thrips, whiteflies

Grape, Amur River Grape, Gooseberry, Kiwifruit, Maypop, and Schisandra Berry

1–3 pounds of GRANDEVO® per acre
Grape berry moth, grape leaf skeletonizer, grape leafroller, light brown apple moth, oblique-banded leafroller, omnivorous leafroller, orange tortrix

2–3 pounds of GRANDEVO® per acre
Glassy-winged sharpshooter, leafhoppers, mealybugs, mites, Pacific spider mite, thrips, two-spotted spider mite, Willamette spider mite, whiteflies

Herbs and Spices
Angelica, Balm, Basil, Borage, Burnet, Chamomile, Catnip, Chervil, Chive, Clary, Coriander, Costmary, Cilantro, Curry, Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage, Marjoram, Nasturtium, Parsley (Dried), Rosemary, Sage, Savory (Summer and Winter), Sweet Bay, Tansy, Tarragon, Thyme, Wintergreen, Woodruff, and Wormwood

1–3 pounds of GRANDEVO® per acre
Armyworm, loopers, saltmarsh caterpillar

2–3 pounds of GRANDEVO® per acre
Aphids, mites, thrips, whiteflies

Hops and Dried Cones

1–3 pounds of GRANDEVO® per acre
Armyworms, loopers

2–3 pounds of GRANDEVO® per acre
Hops aphid, mites, thrips, whiteflies
Leafy Vegetables
Arugula, Celery, Corn Salad, Cress, Dandelion, Dock, Edible-Leaved Chrysanthemum, Endive, Fennel, Head Lettuce, Leaf Lettuce, Parsley, Purslane, Radicchio, Rhubarb, Spinach, and Swiss Chard

1–3 pounds of GRANDEVO® per acre
Armyworm, cabbage looper, cutworm species, diamondback moth, green cloverworm, loopers, tobacco budworm

2–3 pounds of GRANDEVO® per acre
Aphids, mites, psyllids, thrips, whiteflies

Leaves of Root and Tuber Vegetables
Beets and Turnips

1–3 pounds of GRANDEVO® per acre
Armyworm, cabbage looper, diamondback moth

2–3 pounds of GRANDEVO® per acre
Aphids, psyllids, whiteflies

Legume Vegetables (Succulent or Dried) and Grain Crops

1–3 pounds of GRANDEVO® per acre
Armyworms, cabbage looper, corn earworm, green cloverworm, loopers, pod worms, soybean looper, velvet-bean caterpillar

2–3 pounds of GRANDEVO® per acre
Aphids, kudzu bugs, leafhoppers, mites, thrips, whiteflies

Oilseed Crops
Canola, Safflower, and Sunflower (including Sunflower Grown for Seed)

1–3 pounds of GRANDEVO® per acre
Armyworms, diamondback moth, head worms, Heliothis, loopers, saltmarsh caterpillar

2–3 pounds of GRANDEVO® per acre
Aphids, mites, thrips, whiteflies

Peanut

1–3 pounds of GRANDEVO® per acre
Armyworms, cabbage looper, corn earworm, European corn borer, green cloverworm, pod worms, red-necked peanut worm, saltmarsh caterpillar, soybean looper, velvet-bean caterpillar

2–3 pounds of GRANDEVO® per acre
Aphids, mites, thrips, whiteflies

Peppermint

1–3 pounds of GRANDEVO® per acre
Armyworms, loopers, saltmarsh caterpillar

Pineapple

1–3 pounds of GRANDEVO® per acre
Gummosos-Batracheda Comosa (Hodges), Thecla-Thecla Basilides (Geyr) (Fruitborer)
Pome Fruit
Apples, Crabapple, Loquat, Mayhaw, Pears, and Quince

1–3 pounds of GRANDEVO® per acre
Codling moth, leafrollers (including fruittree, oblique-banded, redbanded, variegated), light brown apple moth, oriental fruit moth, tufted apple budmoth

Application timing: optimal timing for codling moth, leafrollers, and oriental fruit moth can vary between species and geographic locations. Monitor moth flights with pheromone traps and scout regularly to determine larval populations. GRANDEVO® can be used to supplement mating disruption programs.

2–3 pounds of GRANDEVO® per acre
Aphids, mealybugs, mites, pear psylla, thrips, whiteflies

Pomegranate

1–3 pounds of GRANDEVO® per acre
Armyworms, cankerworms, codling moth, cutworms, European red mite, filbert leafroller, fruittree leafroller, gypsy moth, McDaniel spider mite, oblique-banded leafroller, oriental fruit moth, Pacific spider mite, redbanded leafroller, tufted apple budmoth, twig borer, two-spotted red mite, variegated leafroller, walnut caterpillar

Root and Tuber Vegetables
Black Salsify, Carrot, Cassava, Celeriac, Chayote Root, Chicory, Chinese Artichoke, Edible Burdock, Garden Beet, Ginger, Ginseng, Horseradish, Jerusalem Artichoke, Oriental Radish, Parsnip, Potatoes, Radish, Rutabaga, Salsify, Skirret, Spanish Salsify, Sugar Beet, Sweet Potatoes, Turmeric, Turnip, Turnip Rooted Chervil, Turnip Rooted Parsley, and Yams

1–3 pounds of GRANDEVO® per acre
Armyworms, artichoke plume moth, European corn borer, loopers

2–3 pounds of GRANDEVO® per acre
Aphids, potato aphid, potato leafhopper, psyllids, whiteflies

Stone Fruits
Apricots, Cherry, Nectarine, Peach, Plum, Prune

1–3 pounds of GRANDEVO® per acre
Green fruitworm, leafrollers (including fruittree, oblique-banded, pandemic, redbanded, and variegated), oriental fruit moth, peach twig borer, redbumped caterpillar, tent caterpillar

Application timing: optimal timing for leafrollers and peach twig borer can vary between species and geographic locations. Monitor moth flights with pheromone traps and scout regularly to determine larval populations. GRANDEVO® can be used to supplement mating disruption programs.

2–3 pounds of GRANDEVO® per acre
Aphids, mealybugs, mites, thrips, whiteflies

Strawberry

1–3 pounds of GRANDEVO® per acre
Armyworms, cutworms, leafrollers

2–3 pounds of GRANDEVO® per acre
Aphids, Lycus, mites, thrips, whiteflies

Tobacco

1–3 pounds of GRANDEVO® per acre
Hornworms, loopers, tobacco budworm

2–3 pounds of GRANDEVO® per acre
Aphids, mites, thrips, whiteflies
Tree Nuts and Pistachios
Almond, Cashew, Chestnut, Filbert (Hazelnut), Macadamia, Pecan, Pistachio, Walnut

1–3 pounds of GRANDEVO® per acre
Fall webworm, filbert worm, hickory shuckworm, navel orange worm, oblique-banded leafroller, peach twig borer, pecan nut casebearer, redhumped caterpillar

2–3 pounds of GRANDEVO® per acre
Aphids, mealybugs, mites, pecan weevil, whiteflies

Tropical and Subtropical Fruit
Acerola, Atemoya, Avocado, Biriba, Black Sapote, Canistel, Cherimoya, Custard Apple, Feijoa, Guava, Ilama, Jaboticaba, Kiwi, Longan, Lychee, Mamey Sapote, Mango, Papaya, Passionfruit, Pulasan, Rambutan, Sapodilla, Soursop, Spanish Lime, Star Apple, Starfruit, Sugar Apple, Ti Palm Leaves, Wax Jambu (Wax Apple), and White Sapote

1–3 pounds of GRANDEVO® per acre
Aphids, avocado leafroller, citrus peelminer, cutworms, fruittree leafroller, omnivorous leafroller, orange tortrix, thrips, western tussock moth, whiteflies
STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

**Pesticide Storage:** Store in original container in a cool, dry place.

**Pesticide Disposal:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**Container Handling:** Non-refillable container. Do not reuse or refill this container.

Completely empty bag into application equipment. Then offer for recycling if available, or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. (For instances where state and local ordinances do allow burning): If burned, stay out of smoke.

WARRANTY

To the extent permitted by applicable law, the seller makes no warranty, expressed or implied, of merchantability, fitness or otherwise concerning use of this product. The user assumes all risks of use, storage or handling that are not in strict accordance with the accompanying directions.

Label date: May 13, 2013

Made in the U.S.A.

US Patents No. 7,244,607
GRANDEVO® is a trademark of Marrone Bio Innovations, Inc.
Marrone Bio Innovations' name and logo are registered trademarks of Marrone Bio Innovations, Inc.
© Marrone Bio Innovations, Inc.
2121 Second St., Suite B-107, Davis, CA 95618
1-877-664-4476
www.marronebio.com
info@marronebio.com
OMRI Listed

The following product may be used in certified organic production or food processing and handling in accordance with the Canadian Organic Standards.

Product
Grandevo

Company
Marrone Bio Innovations
Pamela G. Marrone, Ph.D.
1540 Drew Ave
Davis, CA 95618

Status
Allowed with Restrictions

Category
COR: Biological organisms

Issue date
12-Feb-2014

Product number
moi-4353

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Sep-2017

Restrictions
May be used as a pesticide if the requirements of CAN/CGSB-32.310 section 5.6.2 are met, which require the use of organic management practices and mechanical techniques.

Caution: This product was produced using GE substrate or growth media. If commercially available, a non-GE alternative shall be used in accordance with CAN/CGSB 32.311 subclause 4.1.3.b.

Executive Director

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the applicable OMRI Standards Manual®. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Canada Products List® at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a CFIA accredited Certification Body. It is the operator’s responsibility to properly use the product, including following any restrictions.
If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents, call 1-888-740-8712.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of barrier laminate, nitrile or neoprene rubber or Viton.

Mixers, loaders, applicators, and other handlers must wear the following:

- Long-sleeved shirt
- Long pants
- Shoes and socks
- Chemical-resistant gloves

In addition to the above PPE, applicators using hand-held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH approved respirator with:
- A dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C), or
- A canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or
- A cartridge or canister with any R, P, or HE filter.

Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.
When handlers use aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides 40 CFR 170.240 (d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS:**

**Users should:**
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is highly toxic to fish. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift from treated areas may be hazardous to organisms in adjacent aquatic sites. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are foraging the treatment area.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR, Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not apply this product in a way that will contact workers or other persons either directly or through spray drift. Only protected handlers may be in the area during application.

For any requirement specific to your state or Tribe, consult the State or Tribal Agency responsible for pesticide regulation.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR, Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter until vapors, mists, and aerosols have dispersed and the treated area has been thoroughly ventilated.

Keep unprotected persons out of treated areas until sprays have dried.

Wear protective clothing when using or handling this product to help avoid exposure to eyes and skin. Eye protection, gloves, a long-sleeved shirt and long pants are recommended.

Do not enter or allow others to enter until sprays have dried.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**INDOOR AREAS FOR USE IN AND AROUND:**

- Greenhouses

**OUTDOOR AREAS FOR USE IN AND AROUND:**

- Nurseries
- Outdoor Growing Crops

**TO KILL THE FOLLOWING LISTED INSECTS:** Including:


**USE RESTRICTIONS**

- Do not make applications during the rain.
- Do not wet plants to the point of runoff.
- Do not apply at wind speeds greater than 10 mph at the point of runoff.
- When used in dairy barns or facilities: Close milk tank lids to prevent contamination from spray and dead or falling insects.
- Do not remain in the treated area. Exit area immediately and remain outside the treated area until aerosols, vapors and/or mists have dispersed.
- Not for use in outdoor residential misting systems (indoor or outdoor).
- Not for indoor use except in greenhouses.

**Spray Drift Management for Agricultural Crops**

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interactions of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not apply at wind speeds greater than 10 mph at the application site.

Do not make any type of application into temperature inversions.

Apply as a medium or coarser spray (ASABE standard 572).

**Additional Requirements for Aerial Applications:**

- Do not release spray at a height greater than 10 feet above the ground or crop canopy.

- Do not release spray at a height greater than 4 feet above the ground or crop canopy.

**PESTICIDE RESISTANCE MANAGEMENT**

PyGanic® Crop Protection EC 1.4 contains a Group 3A insecticide. Insect biotypes with acquired resistance to Group 3A may eventually dominate the insect population if Group 3A insecticides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by PyGanic® Crop Protection EC 1.4 or other Group 3A insecticides.

- To delay insecticide resistance consider:
  - Avoiding the consecutive use of PyGanic® Crop Protection EC 1.4 or other Group 3A insecticides that have a similar target site of action, on the same insect species.
  - Using tank mixtures or premixes with insecticides that have a different target site of action Group as long as the involved products are all registered for the same use and have different sites of action.
  - Basing insecticide use on a comprehensive IPM program.
  - Monitoring treated insect population for loss of field efficacy.
  - Contacting your local extension specialist, certified crop advisors, and/or manufacturer for pesticide resistance management and or IPM recommendations for the specific site and resistance pest problems.

**GENERAL USE DIRECTIONS**

**IMPORTANT:** It is recommended that the final spray mix be adjusted to a pH of 5.5 to 7.0. Outside of this range, pyrethrins can degrade and the product will lose its effectiveness.

To avoid possible harm to honey bees, it is advisable to apply in the early morning or late evening hours.

**USED ALONE:** Apply 16 fl. oz. (1 pint) to 64 fl. oz. (2 quarts) per acre by ground in sufficient water for thorough coverage. The product may be applied by air at the rate of 16 to 64 fl. oz. per acre in a minimum
of 5 gallons of water. Mix only enough for immediate use. Spraying should begin when the insects first appear. Do not wait until the plants are heavily infested. Repeat as required to maintain effective kill.

**IMPORTANT NOTE:** Plant safety is an important consideration when using insecticides in a greenhouse. However, it is not possible to evaluate the phytotoxicity of PyGanic® Crop Protection EC 1.4H on numerous plant varieties that may react differently to insecticides in different growth stages or under varying environmental conditions. Before making widespread applications of PyGanic® Crop Protection EC 1.4H, or tank mix combinations, treat a limited number of plants and observe for phytotoxicity over a 10-day period.

**DIRECTIONS FOR APPLICATION THROUGH IRRIGATION SYSTEMS:** Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation systems. Do not apply this product through any other type of irrigation system.

**ROOT AND TUBER VEGETABLES:** Including: Arracacha, Arrowroot, Purple Arrowroot, Japanese Artichoke, Jerusalem Artichoke, Garden Beets, Sugar Beets, Edible Burdock, Edible Canna, Carrots, Cassava (bitter or sweet), Celeriac (Celery root), Chayote (root), Chervil (Turnip rooted), Chicory, Chufa,
Dasheen, Ginger, Ginseng, Horseradish, Leren, Parsley (Turnip rooted), Parsnip, Potato, Radish, Japanese Radish (Daikon), Rutabaga, Salsify, Black Salsify, Spanish Salsify, Sweet Potato, Tanger, Turmeric, Turnip, Yam (true), Yam Bean.

**LEAVES OF ROOT AND TUBER VEGETABLES:** Including: Garden Beet, Sugar Beet, Edible Burdock, Carrot, Cassava (bitter or sweet), Celeriac (Celery root), Cervil (Turnip rooted), Chicory, Dasheen (Taro), Parsnip, Radish, Japanese Radish (Daikon), Rutabaga, Black Salsify, Sweet Potato, Tanger, Turnip, Yam (true), Yam Bean.

**LEAVES OF FOLIAGE VEGETABLES:** Including: Garlic, Great-headed Garlic, Leek, Onion (bulb and green), Welsh, Shallot.

**LEAVES OF BRASSICA (COLE) VEGETABLES:** Including: Broccoli, Chinese Broccoli (Gai Lan), Broccoli Raab (Rapini), Brussels Sprouts, Cabbage, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavelo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.


**FOLIAGE OF LEGUME VEGETABLES:** Including: Plant part of any legume vegetable included in the legume vegetable group including any variety of Beans, Field Peas, Soybeans.

**FRUITING VEGETABLES:** Including: Eggplant, Ground Cherry, Okra, Pepinos, Pepper (Bell Pepper, Chili Pepper, Cooking Peppers, Pimientos, Sweet Peppers), Tomatillo, Tomatoes.

**CUCURBIT VEGETABLES:** Including: Balsam Apple, Balsam Pear (Bitter Melon), Chayote (fruit), Chinese Waxgourd (Chinese Preserving Melon), Chinese Cucumber, Citron Melon, Cucumber, Gherkin, Edible Gourds, Melons (including hybrids, Cantaloupe, Casaba, Crenshaw, Golden Pershaw Melon, Honeydew Melons, Honey Balls, Mango Melon, Muskmelon, Persian Melon, Pineapple Melon, Santa Claus Melon, Snake Melon, Pumpkin, Squash (Summer and Winter), Watermelon (including hybrids).

**CITRUS FRUITS:** Including: Calamondin, Citron, Citrus Hybrids, Grapefruit, Kumquats, Lemons, Limes, Mandarin (Tangerine), Orange (sweet and sour), Pummelo, Satsuma Mandarin, (Citrus spp. includes Chironja, Tangelos, Tangors).

**POME FRUITS:** Including: Apple, Crab Apple, Loquat, Pear, Mayhaw, Oriental Pear, Quince.

**STONE FRUITS:** Including: Apricot, Cherry (sweet and sour), Nectarine, Peach, Plum, Prune, Chickensaw Plum, Damson Plum, Japanese Plum, Pluimcot.

**SMALL FRUITS AND BERRIES:** Including: Blackberry, Blueberry, Cranberry, Currant, Dewberry, Elderberry, Gooseberry, Grape, Huckleberry, Loganberry, Ollalieberry, Raspberry (Black and Red), Strawberry, Youngberry.

**TREE NUTS:** Including: Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (Hazelnut), Hickory Nut, Macadamia Nut (Bush Nut), Pecan, Pistachio, Walnut, Black and English (Persian).

**ORIENTAL VEGETABLES:** Including: Acerola, Atemoya, Balsam Pear (Bitter Melon), Carambola, Japanese Artichoke, Chinese Broccoli (Gai Lan), Chinese Cabbage (Bok Choy, Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavelo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.

**CEREAL GRAINS:** Including: Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl Millet, Popcorn, Rice, Rye, Sorghum (Milo), Teosinte, Triticale, Wheat, Wild Rice.

**FORAGE, FODDER AND STRAW OF CEREAL GRAINS:** Including: Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl Millet, Popcorn, Rice, Rye, Sorghum (Milo), Teosinte, Triticale, Wheat, Wild Rice.

**GRASSES FOR SEED, FORAGE, FODDER AND HAY:** Including: Any Grass (Gramineal family [green or cured], except Sugarcane and those listed in the cereal grains group) that will be fed to or grazed by livestock, all Pasture and Range Grasses and Grasses grown for Hay and Silage, Bermudagrass, Bluegrass, Bromegrass, Fescue.

**NON-GRASS ANIMAL FEEDS:** Including: Alfalfa, Velvet Beas, Clover, Kudzu, Lespedeza, Lupine, Sainfoin, Trefoil, Crown Vetch, Milkvetch.
HERBS AND SPICES: Including: Allspice, Angelica, Anise (Anise seed), Anise (Star), Annatto (seed), Balm (Lemon Balm), Basil, Borage, Burnet, Caper Buds, Caraway, Caraway (Black), Cardamon, Cassia Bark, Cassia Buds, Catnip, Celery Seed, Chamomile, Chervil (dried), Chicory, Chive, Chive (Chinese), Cinnamon, Clary, Clave Buds, Coriander (Cilantro or Chinese Parsley) (leaf), Coriander (Cilantro) (seed), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (Dill Weed), Dill (seed), Fennel (common), Fennel (Florence) (seed), Fenugreek, Grains of Paradise, Horehound, Hyssop, Juniper Berry, Lavender, Lemongrass, Lovage (leaf), Lovage (seed), Mace, Marigold, Marjoram (includes sweet or annual Marjoram, Wild Marjoram or Oregano, and Pot Marjoram), Mustard (seed), Nasturtium, Nutmeg, Oregano, Mint, Paprika, Parsley (dried), Pennyroyal, Pepper (Black), Pepper (White), Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (Summer and Winter), Sweet Bay (Bay Leaf), Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.


TO KILL ANTS (EXCLUDING FIRE AND PHARAOH ANTS) ON ORCHARD FLOORS AND VINEYARD FLOORS: Apply as a broadcast spray to the entire orchard floor using ground spray equipment at 5 to 18 fl. oz. per acre in 25 or more gallons of water. For best results use the high rate for heavy infestations and the lower rate for light infestations.

Do not apply where weed growth or other obstructions would impede uniform coverage of the orchard floor. Mow or chemically control weeds before the application. Follar applications of PyGanic® Crop Protection EC 1.4g may be made in addition to the orchard floor treatment.

USE ON GREENHOUSE FRUITS, VEGETABLES, FLOWERS AND FOLIAGE PLANTS

USED ALONE: Combine 16 fl. oz. (1 pint) to 32 fl. oz. (1 quart) with 30 gallons of water for applications with conventional hydraulic sprayers or 1 to 2 fl. oz. per gallon of water for applications with compressed sprayers.

FOR USE IN GARDENS AND TRUCK GARDENS: For commercial production of listed crops to kill listed insects dilute 0.9 to 1.8 fl. oz. of PyGanic® Crop Protection EC 1.4g per gallon of water. Apply diluted solution with all types of agricultural sprayers, including compressed air sprayers or pump driven sprayers.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Keep this product in a tightly closed container when not in use. Store in a cool, dry (preferably locked) area. As a pesticide storage area. Always store pesticides in the original container. Store away from food, feed, seed, fertilizers, and veterinary supplies. Place formulations on lower shelves and dry formulations above.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container.

Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recapture. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Products That Work, From People Who Care® is a registered trademark of Valen't U.S.A. Corporation.

MGK and PyGanic are registered trademarks of McLaughlin Gormley King Company.

Manufactured by:

MGK
8810 Tenth Avenue North
Minneapolis, MN 55427
Rev. 0116a-0816

Information contained in this booklet is accurate at the time of printing. Since product testing is a continuous process, please read and follow the directions on the product label for the most current directions and precautionary statements.

Always check with your state to verify state registration status or call 800-6-VALENT (682-5368).

For state registration and/or supplemental labels, please call.

Products That Work, From People Who Care® | 800-6-VALENT (682-5368)

Always read and follow label instructions.

©2016 Valen’t U.S.A. Corporation. All rights reserved. Printed in the U.S.A.
SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Product Name: PyGanic® Crop Protection EC 1.4 II
EPA Registration Number: 1021-1771

Other means of identification
Part Code: 7443

Recommended use of the chemical and restrictions on use:
Recommended Use: An Insecticide for Organic Crop Protection.

Details of the supplier of the safety data sheet
Manufacturer Address: McLaughlin Gormley King Company
8810 10th Avenue North
Minneapolis, MN 55427
Telephone Number: (800) 645-6466, or (763) 544-0341
e-Mail Address: mgk-sds@mgk.com

Emergency telephone numbers:
24 Hour TRANSPORTATION Emergency: CHEMTREC®: (800) 424-9300
International: (703) 527-3887
24 Hour MEDICAL Emergency: SafetyCall®: (888) 740-8712, or (952) 852-9509

Comments:
MGK® Hours of operation are 8:00 am to 4:30 pm CST, 14:00 to 22:30 GMT.
For MEDICAL EMERGENCIES or PESTICIDE INCIDENTS, call 24 hours a day to
(888) 740-8712, or (952) 852-9509.

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status:
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

<table>
<thead>
<tr>
<th>Acute toxicity - Inhalation (Dusts/Mists)</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 3</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label elements

WARNING

Hazard statements
• H332 - Harmful if inhaled
• H316 - Causes mild skin irritation
• H317 - May cause an allergic skin reaction
\begin{itemize}
\item H402 - Harmful to aquatic life
\item H412 - Harmful to aquatic life with long lasting effects
\end{itemize}

Precautionary Statements - Prevention:
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P271 - Use only outdoors or in a well-ventilated area

Precautionary Statements - Response:
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell

Hazards not otherwise classified (HNOC):
Not applicable.

\section*{3. COMPOSITION/ INFORMATION ON INGREDIENTS}

\begin{tabular}{|l|l|l|}
\hline
Chemical Name & CAS No & Weight-% \\
\hline
Pyrethrins & 8003-34-7 & 1.4 \\
\hline
\end{tabular}

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Comments: Ingredients not identified are proprietary or non-hazardous. Values are not product specifications.

\section*{4. FIRST AID MEASURES}

\textbf{Aspiration pneumonia hazard:} • No information available

\textbf{Description of first aid measures:}

\textbf{Eye contact:} Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

\textbf{Skin Contact:} Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

\textbf{Ingestion:} If swallowed, IMMEDIATELY call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or a doctor. Never give anything by mouth to an unconscious person.
Inhalation: Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Self-protection of the First Responder: Use personal protective equipment as required.

Note to physicians: For skin effects, a highly efficient therapeutic agent for Pyrethrin/Pyrethroid exposure is topical application of tocopherol acetate (Vitamin E).

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media:
Caution: Use of water spray when fighting fire may be inefficient.

Hazardous combustion products: Carbon monoxide. Carbon dioxide (CO2).

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to Mechanical Impact: None.
Sensitivity to Static Discharge: None.

Protective equipment and precautions for firefighters:
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Chronic Hazard Star Legend
* = Chronic Health Hazard

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions: Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment: Prevent further leakage or spillage if safe to do so.

Methods for cleaning up: Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE
Precautions for safe handling

Advice on safe handling: Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. For more information, see product label.

Conditions for safe storage, including any incompatibilities

Storage Conditions: Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. For more information, see product label.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control parameters

Exposure Guidelines: This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins</td>
<td>TWA: 5 mg/m³ TWA: 5 mg/m³ (vacated) TWA: 5 mg/m³</td>
<td>IDLH: 5000 mg/m³ TWA: 5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls: Safety showers Eyewash stations Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection: Tight sealing safety goggles. Face protection shield.

Skin and body protection: Wear protective gloves and protective clothing.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations: When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical state: Liquid
Appearance: Clear, amber - brown
Odor: Sweet
Odor threshold: No information available
Color (Gardner Scale): No information available

<table>
<thead>
<tr>
<th>Property</th>
<th>Values:</th>
<th>Comment: • Method</th>
</tr>
</thead>
</table>
10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization: Hazardous polymerization does not occur.

Conditions to avoid
Extremes of temperature and direct sunlight.

Incompatible materials: Incompatible with strong acids and bases. Incompatible with oxidizing agents.

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide (CO2)

11. TOXICOLOGICAL INFORMATION

Numerical measures of toxicity - Product Information
PyGanic® Crop Protection EC 1.4 II

Oral LD₅₀: >2,000 mg/kg (rat)
Dermal LD₅₀: >2,000 mg/kg (rabbit)
Inhalation LC₅₀: >2.33 mg/L (rat; 4 hours)

Eye contact: Irritation clearing in 72 hours.
Skin Contact: Slight irritation at 72 hours.
Skin Irritation Index: 1.58

Sensitization: Positive.

Pyrethrins/ Pyrethrum: Slightly elevated incidences of benign tumors of the thyroid and liver were seen in rats following lifetime administration of high doses of Pyrethrins. Further detailed scientific studies into the mode of action responsible for these effects show that:
1) Because of biological species differences, the rat thyroid tumors are not relevant to humans.
2) The rat liver tumors occur in animals only at doses greatly exceeding human exposure levels and that cause cell proliferation (mitogenesis). Based on these data, the USEPA has classified Pyrethrins as "Not Likely to be Carcinogenic to Humans," at doses that do not cause a mitogenic response in the liver/ cell proliferation. Thus, Pyrethrins can be considered to be non-carcinogenic at exposure levels relevant to human use of Pyrethrins-containing products.

Carcinogenicity: No information available.

Reproductive toxicity:
 Developmental Toxicity: No information available.
 Teratogenicity: No information available.
 STOT - single exposure: No information available.
 STOT - repeated exposure: No information available.
 Chronic toxicity: Avoid repeated exposure.
 Neurological effects: No information available.
 Target Organ Effects: Central nervous system, Respiratory system, Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Persistence and degradability: No information available.

Bioaccumulation: No information available.

Other adverse effects: No information available.

Environmental hazards (EPA): Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Disposal of wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations. For more information, see product label.

Contaminated packaging: For more information, see product label.

14. TRANSPORT INFORMATION

DOT (Department of Transportation)

UN/ID Number: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s., RQ (Pyrethrins)
Hazard Class: 9
Packing Group: III
Reportable Quantity (RQ): Pyrethrins (1 Lb.)

Other Shipping Information: This material is not regulated as a hazardous material by the DOT in quantities less than 71.4 Lbs.

Shipping name for quantities less than 71.4 Lbs.: Insecticides, Insect or Animal Repellent, Liquid

Air (IATA/ ICAO)

UN/ID Number: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s., RQ (Pyrethrins)
Hazard Class: 9
Packing Group: III

Vessel (IMO/ IMDG)

UN/ID Number: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s., RQ (Pyrethrins)
Hazard Class: 9
Packing Group: III

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>No</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>
CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins 8003-34-7</td>
<td>1 lb</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins 8003-34-7</td>
<td>1 lb</td>
<td>-</td>
<td>RQ 1 lb final RQ RQ 0.454 kg final RQ</td>
</tr>
</tbody>
</table>

US State Regulations:
California Proposition 65:
This product does not contain any Proposition 65 chemicals

U.S. EPA Label Information:
EPA Registration Number: 1021-1771

Difference between SDS and EPA (FIFRA) Pesticide label:
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for Safety Data Sheets (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use. The hazard information required on the pesticide label is reproduced below:

Signal word: CAUTION

Precautionary Statements:
• Harmful if swallowed.
• Harmful if absorbed through the skin.
• Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

International:
TSCA
DSL/NDSL
EINECS/ELINCS
ENCS
IECSC
KECL
PICCS
AICS

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION.

<table>
<thead>
<tr>
<th>Issue Date:</th>
<th>Revision Date:</th>
<th>Revision Note:</th>
</tr>
</thead>
</table>

**SDS Prepared By:** Troy Azzivitto, MGK® Chemistry Department.  
**e-Mail Address:** mgk-sds@mgk.com

**Disclaimer:** The data contained herein are based on information currently available to McLaughlin Gormley King Company and, to the best of our knowledge, are accurate and based on sound expert opinion. Our statements herein, however, are not to be taken as a warranty or representation for which McLaughlin Gormley King Company assumes legal responsibility.

End of Safety Data Sheet.
Product
PyGanic® Crop Protection EC 1.4 II

Company
MGK Co.
Mr. John Buenneke
8810 10th Ave. N
Minneapolis, MN 55427

Status
Allowed with Restrictions

Category
NOP: Pyrethrum

Issue date
28-May-2002

Product number
mgk-9643

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Dec-2017

Restrictions
May be used as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the current OMRI Standards Manual®. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Products List® at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator’s responsibility to properly use the product, including following any restrictions.

Organic Materials Review Institute
P.O. Box 11558, Eugene, OR 97440-3758, USA
541.343.7600 • fax 541.343.8971 • info@omri.org • www.omri.org
For use on vegetables, fruits, nuts, melons, outdoor ornamental plants and agronomic crops. For foliar control of fungal disease and insect pests. Can be used up to day of harvest.

✔️ FOR ORGANIC PRODUCTION

ACTIVE INGREDIENT:
- Clarified Hydrophobic Extract of Neem Oil .........................................................70%

OTHER INGREDIENTS .................................................................30%

TOTAL 100%

This product contains 5.46 lb of clarified hydrophobic extract of neem oil per US gallon.

This container will treat up to 0.5 acres when used at the highest application rate (only for containers less than 5 gallons).

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Inside Panels for Additional Precautionary Statements, Directions for Use, Storage and Disposal Statements, and WARRANTY

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

FIRST AID
If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Hot Line Number: 1-800-255-3924.

Personal Protective Equipment:
Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or Viton.
- Shoes plus socks.

Follow the manufacture’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:
Users should:
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS
This product is hazardous to fish and aquatic invertebrates. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washer/water or rinsates.

BEE HAZARD
This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treatment area.

PHYSICAL AND CHEMICAL HAZARDS
Do not use or store near heat or open flame.
DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.
Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:
• Coveralls
• Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinyl chloride (PVC) or Viton.
• Shoes plus socks.

GENERAL INFORMATION:
• Thorough coverage is necessary to provide good disease and mite control. Trilogy® prevents fungal attack of plant tissue and contact activity to mite pressure on the plant. Avoid excessive runoff of spray material for maximum control.
• For best results, maintain constant agitation in spray equipment.
• For optimal performance, do not mix with cold water (less than 45°F).
• Do not apply to wilted or otherwise stressed plants, or to newly transplanted materials or crops prior to root establishment.
• Do not apply to known sensitive plant species, such as impatiens flowers, fuchsia flowers, hibiscus flowers, some rose flowers, ornamental olive trees, or some carnation varieties without prior testing.
• When used in conjunction with beneficial insects, conduct a small trial to assure compatibility before using on a large scale.
• As with other oil-based products, exercise care in timing applications to early morning/late evening to minimize the potential for leaf burn.
• Use with care on plants with tender tissue. Check for leaf burn in small scale trials prior to use.

LANDSCAPE AND NURSERY USE INSTRUCTIONS

FUNGICIDE USE

ORNAMENTAL DISEASE CONTROL
Trilogy® is an effective fungicide for the prevention and control of various fungal diseases including black spot on roses, powdery mildew, downy mildew, anthracnose, rust, leaf spot, botrytis, needle rust, scab, flower, twig, and tip blight, and alternaria.

Landscape and Nursery Ornamentals
Trilogy® will provide broad spectrum control of many fungal diseases affecting ornamental flowering plants, trees, shrubs, and foliage when used at the rate of 1 gallon per 100 gallons of water. Apply Trilogy® at a rate of 1:100 when spraying as a preventative for outdoor applications. Under extreme outdoor conditions, apply Trilogy® at the 1:50 application rate (see table for detailed use rates). This will provide the necessary control under the extreme outdoor conditions. When using Trilogy® as a preventative, make application on a 14-day schedule. If disease is present, use a 7-day application schedule to control the disease and prevent further damage from occurring.

MIXING INSTRUCTIONS
Add Trilogy® to one-half (1/2) full tank under agitation containing water of 45°F or greater before filling to desired level. If water temperature is below 45°F, premix Trilogy® at 1:1 ratio with tepid water to ensure good emulsification. Then dilute to final volume. When combining with other products, such as wettable powder insecticides or fungicides, add these items first when the tank is approximately 1/3 full. Ensure that there is good agitation while mixing for complete emulsification. Maintain agitation during spray application. Do not use if this oil does not form a uniform, cloudy emulsion.

APPLICATION INSTRUCTIONS
Apply until plant surface is uniformly wet with minimal runoff at 25-40 psi with hand sprayer or 100-200 psi with power sprayer as a fine spray to both leaf surfaces. Avoid excessive application.

| MANAGEMENT OF LANDSCAPE AND ORNAMENTAL DISEASES |
|-----------------|-----------------|-----------------|-----------------|
| SPRAY TARGET    | CONCENTRATION   | SPRAY INTERVAL  | PRECAUTIONS     |
| Outdoor Flowering Plants | 1:50 - 1:100  | 7-14 days       | Do not spray impatients flowers |
| Outdoor Woody Plants | 1:50 - 1:100  | 14 days         |                  |

| MANAGEMENT OF TURF DISEASES |
|-----------------|-----------------|-----------------|-----------------|
| SPRAY TARGET    | CONCENTRATION   | SPRAY INTERVAL  | PRECAUTIONS     |
| Snow Mold       | 1:100 - 1:50   | 14 days         | In Fall before first snow |
| Dollar Spot     | 1:100 - 1:200  | 7-14 days       | At first sign of disease |
| Brown Patch     | 1:100 - 1:200  | 7-14 days       | At first sign of disease |

INSECTICIDE/MITICIDE USE
For use to control whiteflies, mealybugs, aphids, leafhoppers, mites and scales on ornamentals, trees, and shrubs in and around commercial nurseries and other commercial structures.

Use Trilogy® at the rate of 1-2 gallons per 100 gallons of water. The low rate (1.0%) can be used when pest pressure is low. Use the high rate (2.0%) for high pest infestations or to control more troublesome pests, such as mites and scales. Determine the best rate for your particular situation.

Make sprays on a 7-14 day interval depending on the severity of the pest problem. Use the 7-day schedule until the pest population is reduced. Then use a 14-day interval for control.

AGRICULTURAL USE DIRECTIONS
Trilogy® is a broad spectrum fungicide of certain diseases and controls mites in citrus, deciduous fruits and nuts, vegetable crops, cereal grains, and other miscellaneous crops.

• Do not use Trilogy® after bloom on table grapes or following bunch closure on wine grapes. Do not use Trilogy® after pit hardening on stone fruit.
• Use care when applying near streams, ponds, lakes, or other bodies of water. Do not apply Trilogy® when weather conditions favor drift or when the likelihood of runoff is high.
• Apply Trilogy® by conventional, low volume, and aerial application equipment.
APPLICATION INSTRUCTIONS

Ground Application: Apply Trilogy® by ground application in a minimum of 25 gallons of water/acre.

Chemigation: Do not apply this product through any type of irrigation system.

Aerial Application: For those crops where aerial applications are indicated, apply a minimum of 5 gallons of water/acre unless otherwise specified. Avoid application under conditions when uniform coverage cannot be obtained or when excessive drift may occur. Do not apply directly to humans, animals or aquatic animals.

Chemigation: Can be used for fungicide or miticide applications when a registered fungicide or miticide is not available or when excessive drift may occur. Do not apply more than 5 gallons of Trilogy® per application. Larger plants will require higher amounts of water to obtain adequate coverage.

Miticide: Apply Trilogy® at a rate of 1.0-2.0% for mitigate mites at a rate of 1.0-2.0% in 25-200 gallons of water. Do not apply more than 5 gallons of Trilogy® per application. Reapply Trilogy® every 7-14 days until threat of mite damage or other liability resulting from the use of Trilogy® in a tank mix combination. Avoid tank mixes with Captan®, Sulfur, Bravo®, Echo®, chlorothalonil or other chemically similar products as unpredictable results or leaf burn may occur.

TANK MIXING: Trilogy® has been found to be compatible with most commonly used fungicides, insecticides and fertilizers. Check physical compatibility first with other products before mixing by using a jar test. Using a quart jar, add the proportionate amounts of the products to 1 quart of water. After thoroughly mixing, let mixture stand for at least 5 minutes. Growers must tank mix combinations for phytotoxicity on a sample of plants prior to use. Due to the wide variation in climatic conditions, cultural practices, and other factors, the user assumes full responsibility for any crop damage or other liability resulting from the use of Trilogy® in a tank mix combination. Avoid tank mixes with Captan®, Sulfur, Bravo®, Echo®, chlorothalonil or other chemically similar products as unpredictable results or leaf burn may occur.

DILUTION TABLE FOR LOW VOLUME (INCLUDING AERIAL) APPLICATIONS

<table>
<thead>
<tr>
<th>Gallons of Water</th>
<th>TRILOGY®</th>
<th>DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>1 Quart*</td>
<td>5%</td>
</tr>
<tr>
<td>10</td>
<td>1 Quart*</td>
<td>2.5%</td>
</tr>
<tr>
<td>15</td>
<td>1 Quart*</td>
<td>1.67%</td>
</tr>
<tr>
<td>20</td>
<td>1 Quart*</td>
<td>1.25%</td>
</tr>
<tr>
<td>25</td>
<td>1 Quart*</td>
<td>1.0%</td>
</tr>
<tr>
<td>30</td>
<td>1 Quart*</td>
<td>0.83%</td>
</tr>
</tbody>
</table>

*For Citrus, Stone Fruit, Tropical Fruit, Pome Fruit, and Nuts, refer to specific application instructions.

DILUTION TABLE FOR HIGH VOLUME APPLICATION

<table>
<thead>
<tr>
<th>Gallons of Water</th>
<th>Gallons of Trilogy® for 0.5% Solution</th>
<th>Gallons of Trilogy® for 1.0% Solution</th>
<th>Gallons of Trilogy® for 1.5% Solution</th>
<th>Gallons of Trilogy® for 2.0% Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Use 1.0% solution*</td>
<td>0.25 (32 fl. oz.)</td>
<td>0.375 (48 fl. oz.)</td>
<td>0.5 (64 fl. oz.)</td>
</tr>
<tr>
<td>50</td>
<td>0.25 (32 fl. oz.)</td>
<td>0.5 (64 fl. oz.)</td>
<td>0.75 (96 fl. oz.)</td>
<td>1.0</td>
</tr>
<tr>
<td>75</td>
<td>0.375 (48 fl. oz.)</td>
<td>0.75 (96 fl. oz.)</td>
<td>1.125</td>
<td>1.5</td>
</tr>
<tr>
<td>100</td>
<td>0.5</td>
<td>1.0</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>125</td>
<td>0.625 (80 fl. oz.)</td>
<td>1.25</td>
<td>1.875</td>
<td>2.5</td>
</tr>
<tr>
<td>150</td>
<td>0.75</td>
<td>1.5</td>
<td>2.25</td>
<td>3.0</td>
</tr>
<tr>
<td>175</td>
<td>0.875 (112 fl. oz.)</td>
<td>1.75</td>
<td>2.625</td>
<td>3.5</td>
</tr>
<tr>
<td>200</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>225</td>
<td>1.125</td>
<td>2.25</td>
<td>3.375</td>
<td>4.5</td>
</tr>
<tr>
<td>250</td>
<td>1.25</td>
<td>2.5</td>
<td>3.75</td>
<td>5.0</td>
</tr>
</tbody>
</table>

*For Vegetable, Cereal Grains, and Other Miscellaneous Crops, refer to specific use directions.

AGRICULTURAL USE DIRECTIONS: (continued)

- For Diseases: Apply Trilogy® as a 1.0% solution in sufficient amounts of water to achieve complete coverage of foliage. (See the following detailed directions per crop groupings.) When used as a foliar fungicide, begin applications when conditions are favorable for disease but before infection. Apply Trilogy® every 7-14 days until threat of disease is over. Use Trilogy® in rotation with other fungicides to increase the spectrum of control.
- For Mites: For best results, apply Trilogy® in sufficient amounts of water to achieve complete coverage. Trilogy® is most effective when applied before mites or eggs are present in large numbers. (See the following detailed directions per crop groupings.) Apply at a rate of 1.0-2.0% Trilogy®. Reapply Trilogy® every 7-21 days until pressure is over.
- For Insects: For best results, apply Trilogy® at 1.0-2.0% in sufficient amounts of water to achieve complete coverage. Trilogy® is most effective when applied before insects or eggs are present in large numbers. Repeat application based on pest pressure and field scouting for best results. Use the dilution tables to calculate dilution rates.

MIXING INSTRUCTIONS

Add Trilogy® to one-half (1/2) full tank under agitation containing water of 45°F or greater before filling to desired level. If water temperature is below 45°F, premix Trilogy® at a 1:1 ratio with tepid water to ensure good emulsification. Then dilute to final volume. When combining with other products, such as wettable powder insecticides or fungicides, add these items first when the tank is approximately 1/3 full. Ensure that there is good agitation while mixing for complete emulsification. Maintain agitation during spray application. Do not use if this oil does not form a uniform, cloudy emulsion.

STONE AND TROPICAL FRUITS

Fungicide Use: Apply Trilogy® at a rate of 1.0% in 25-200 gallons of water for high volume applications or 0.5 gallon Trilogy® in a minimum of 5 gallons of water per acre for low volume applications. Do not apply more than 2.5 gallons of Trilogy® per acre, per application.

Miticide Use: Apply Trilogy® every 7-14 days until threat of disease is over. For control of Alternaria and Greasy Spot, apply Trilogy® at a 1.0% solution in 25-125 gallons of water per acre in combination with Copper @ 2.0 lbs. a.i. per acre (as found in EPA registered products such as Kocide® and Champ®) as a preventative disease spray tank mixture.

Vegetable, Cereal Grains and Other Miscellaneous Crops

Fungicide Use: Apply Trilogy® at a rate of 0.5-1.0% in 25-100 gallons of water per acre or 2 pints Trilogy® in a minimum of 5 gallons of water per acre for low volume applications. Repeat applications every 7-14 days. Apply no more than 2 gallons Trilogy® per acre, per application. Larger plants will require higher amounts of water to obtain good coverage. For mushrooms, apply Trilogy® at a rate of 0.5-2.0% in 25-100 gallons of water per 8,000 square feet. Repeat applications every 7-14 days.
MITICIDE USE: Apply Trilogy® at a rate of 0.5-2.0% in 25-100 gallons of water per acre or 0.5 pints Trilogy® in a minimum of 5 gallons of water per acre for low volume application. Apply no more than 2 gallons Trilogy® per acre in solution per application. Apply in a solution of sufficient volume to achieve complete coverage of foliage. Reapply Trilogy® every 7-21 days as needed for adequate control. Larger plants will require higher amounts of water to obtain good coverage.

**Walnuts:** Avoid spraying after husk split.

**POME (DECIDUOUS FRUITS) AND NUTS**

**FUNGICIDE USE:** Apply Trilogy® at a rate of 1.0% in 25-100 gallons of water per acre or 0.5 quart Trilogy® in a minimum of 5 gallons of water per acre for low volume application. Apply no more than 2 gallons Trilogy® per acre, per solution. Repeat applications every 7-14 days.

**MITICIDE USE:** Use Trilogy® at a rate of 1.0-2.0% in 25-100 gallons of water per acre or 0.5 quart Trilogy® in a minimum of 5 gallons of water per acre for low volume application. Apply no more than 2 gallons of Trilogy® per acre, per solution. Apply at first signs of pest or pest damage. Repeat application as needed for adequate control every 7-21 days. Do not apply more than 5 gallons Trilogy® per acre, per application.

**CITRUS, POME, STONE, AND TROPICAL FRUITS**

**Crops (including but not limited to):**

- Apples
- Apricots
- Avocados
- Bananas
- Calamondin
- Cherries
- Barbados cherries
- Sour cherries
- Sweet cherries
- Cherimoya
- Citrus citron
- Citrus hybrids
- Crabapples
- Dates
- Feijoa
- Grapes
- Guavas
- Jujubes
- Kiwi fruits
- Kunkquets
- Lemons
- Limes
- Loquats
- Limes
- Lychee
- Mangos
- Mandarin
- Satsuma mandarins
- Nectarines
- Oranges
- Passion fruit
- Peaches
- Pears
- Oriental pears
- Pineapples
- Plantains
- Plums
- Pomegranates
- Prunes
- Pummelos
- Quinces
- Tangelos
- Tangerines

**CUCURBITS**

- Balsam pears
- (bitter melons)
- Cantaloupes
- Casaba
- Chinese waxgourds
- Citron melons
- Crenshaw
- Cucumbers
- Crenshaw
- Crenshaw
- Cucumbers
- Gherkins
- Gourds
- Honey balls
- Melons (incl. hybrids)
- Honeydew melons
- Muskmelons
- Persian melons
- Pumpkins
- Squashes
- Watermelons
- (incl. hybrids)
- Zucchinis

**SMALL FRUITS AND BERRIES**

- Blackberries
- Blueberries
- Boysenberries
- Cranberries
- Currants
- Dewberries
- Elderberries
- Gooseberries
- Grapes
- Huckleberries
- Loganberries
- Olallie berries
- Raspberries (black & red)
- Strawberries
- Youngberries

**NUTS**

- Almonds
- Beech nuts
- Brazil nuts
- Butternuts
- Cashews
- Chestnuts
- Chiniquapins
- Filberts
- Hickory nuts
- Japanese horse chestnuts
- Macadamia nuts
- Pecans
- Pistachios
- Walnuts

**BULB, COLE AND LEAFY VEGETABLES**

- Arugula
- Broccoli
- Chinese broccoli
- Collard greens
- Brussels sprouts
- Kale
- Kohlrabi
- Leek
- Lettuce (head & leaf)
- Low-bok
- Onions
- Orach
- Parsley
- Purslane
- Radicchio
- Rappini
- Rhubarb
- Shallots
- Spinach
- Chinese Spinach (Amaranth, Porkchop)
- Tomatillos
- Swiss chard
- Turnip tops

**LEGUME AND FRUITING VEGETABLES**

- Beans
- Broad beans
- Calabaza
- Chickpeas
- Eggplants
- Ground cherries
- Guar
- Guavas
- Grapes
- Irish potato
- MUSTARD GREENS
- Collards
- Chinese mustard cabbage
- Chinese broccoli
- Brussels sprouts
- Mustard greens
- Oriental pears
- Pineapples
- Plantains
- Plums
- Pomegranates
- Prunes
- Pummelos
- Quinces
- Tangelos
- Tangerines

**ROOT AND TUBER VEGETABLES**

- Artichokes
- Beets
- Cardone
- Carrots
- Cassava
- Ginger
- Ginseng
- Horseradish
- Parsnips
- Potatoes
- Sweet potatoes
- Radishes
- Rutabaga
- Taro (Dasheen)
- Turmeric
- Turnips
- Yams
- Yam beans

**Crops (including but not limited to):**

- Fennel
- Garlic
- Greens
- Collard greens
- Rape greens
- Kale
- Kohlrabi
- Leek
- Lettuce (head & leaf)
- Low-bok
- Onions
- Orach
- Parsley
- Purslane
- Radicchio
- Rappini
- Rhubarb
- Shallots
- Spinach
- Chinese Spinach (Amaranth, Porkchop)
- Tomatillos
- Swiss chard
- Turnip tops
- Peanuts
- Pigeon peas
- Peppers
- Pigeon pea
- Snow peas
- Soybeans
- Tomatillos
- Tomatoes
- Peas
HERBS AND SPICES

Refer to specific application instructions found directly below the heading

Agricultural Use Directions.

Crops (including but not limited to)

<table>
<thead>
<tr>
<th>Plant</th>
<th>Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anise</td>
<td>Marigold</td>
</tr>
<tr>
<td>Balm</td>
<td>Marjoram</td>
</tr>
<tr>
<td>Basil</td>
<td>Mint</td>
</tr>
<tr>
<td>Borage</td>
<td>Nasturtium</td>
</tr>
<tr>
<td>Camomile</td>
<td>Pennyroyal</td>
</tr>
<tr>
<td>Caraway</td>
<td>Peppermint</td>
</tr>
<tr>
<td>Catnip</td>
<td>Rosemary</td>
</tr>
<tr>
<td>Celery</td>
<td>Rue</td>
</tr>
<tr>
<td>Chives</td>
<td>Sage</td>
</tr>
<tr>
<td>Coriander</td>
<td>Savory</td>
</tr>
<tr>
<td>Cumin</td>
<td>Spearmint</td>
</tr>
<tr>
<td>Curry leaf</td>
<td>Sweet bay</td>
</tr>
<tr>
<td>Dandelion</td>
<td>Tarragon</td>
</tr>
<tr>
<td>Dill</td>
<td>Thyme</td>
</tr>
<tr>
<td>Fennel</td>
<td>Wintergreen</td>
</tr>
</tbody>
</table>

VEGETABLE, CEREAL GRAINS AND OTHER MISCELLANEOUS CROPS

Crops (including but not limited to)

<table>
<thead>
<tr>
<th>Plant</th>
<th>Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acerola</td>
<td>Kinship</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>Mushrooms</td>
</tr>
<tr>
<td>Araucaga (Apio)</td>
<td>Nispero</td>
</tr>
<tr>
<td>Asparagus</td>
<td>Oats</td>
</tr>
<tr>
<td>Barley</td>
<td>Okra</td>
</tr>
<tr>
<td>Breadfruit</td>
<td>Quepea</td>
</tr>
<tr>
<td>Buckwheat</td>
<td>Rice</td>
</tr>
<tr>
<td>Canola</td>
<td>Safflower</td>
</tr>
<tr>
<td>Coffee</td>
<td>Seagrapes</td>
</tr>
<tr>
<td>Coriander</td>
<td>Sesame</td>
</tr>
<tr>
<td>Corn</td>
<td>Sorphum</td>
</tr>
<tr>
<td>Popcorn</td>
<td>Soursup (Quanabanas)</td>
</tr>
<tr>
<td>Sweet corn</td>
<td>Star apples</td>
</tr>
<tr>
<td>Cotton</td>
<td>Sugarcane</td>
</tr>
<tr>
<td>Hops</td>
<td>Sunflowers</td>
</tr>
<tr>
<td>Jicama</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Jojoba</td>
<td>Wheat</td>
</tr>
</tbody>
</table>

Pest Control  Suppression  Diseases

<table>
<thead>
<tr>
<th>Pest</th>
<th>Pest</th>
<th>Pest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aphids</td>
<td>Whiteflies</td>
<td>Alternaria</td>
</tr>
<tr>
<td>Mealybugs</td>
<td>Thrips</td>
<td>Anthracnose</td>
</tr>
<tr>
<td>Mites</td>
<td>Leaf blight</td>
<td>Early blight</td>
</tr>
<tr>
<td>Rust mites</td>
<td>Greasy spot</td>
<td>Botrytis</td>
</tr>
<tr>
<td>Spider mites</td>
<td>Downy mildew</td>
<td>Leaf spot</td>
</tr>
<tr>
<td>Scales (Soft scale)</td>
<td>Post-bloom fruit drop</td>
<td>Downy mildew</td>
</tr>
<tr>
<td></td>
<td>Powdery mildew</td>
<td>Powdery mildew</td>
</tr>
<tr>
<td></td>
<td>Molds</td>
<td>Scabs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rusts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shothole</td>
</tr>
</tbody>
</table>

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Keep in original container. Store in a dry place, away from direct sunlight, feed, or foodstuffs. Keep container tightly sealed when not in use. Do not store below 40°F (4°C).

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on-site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container.

- for containers equal to or less than 5 gallons-

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

- for containers greater than 5 gallons-

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

- for 250-gallon refillable containers-

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

WARRANTY

Certis USA, L.L.C. warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

Kocide® is a registered trademark of E.I. du Pont de Nemours and Company.
Champ® is a registered trademark of Nufarm Americas, Inc.
Captan® is a registered trademark of Drexel Chemical Company.
Bravo® is a registered trademark of Syngenta Crop Protection, Inc.
Echo® is a registered trademark of Sipcam Agro USA, Inc.

Date Code: 011414
1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: Trilogy®, Triact® 70EC
PRODUCT CODE: 70051-2
CHEMICAL FAMILY: Lipid
CHEMICAL NAME: Clarified hydrophobic extract of Neem Oil
FORMULA: N/A

EMERGENCY TELEPHONE NUMBERS:
Emergency Information Chem Tel (800) 255-3924
Outside North America Call Collect (813) 248-0585

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS #</th>
<th>WT.%</th>
<th>OSHA PEL</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarified hydrophobic extract of Neem oil (Neem oil TGAI)</td>
<td>947173-77-5</td>
<td>70</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Other ingredients</td>
<td></td>
<td>30</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3. HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW
This product is a brown liquid intended for use as a pesticide to control insects on agricultural crops. This product should pose no health concerns through normal use in accordance with label directions. Do not store near heat or open flame.

Signal Word: CAUTION

Potential Health Effects
ROUTE(S) OF ENTRY: Eyes, skin, oral, inhalation

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE: None noted

ACUTELY EYE CONTACT: May cause mild, reversible eye irritation
CHRONIC EYE CONTACT: Chronic exposure not likely from normal use
ACUTE SKIN CONTACT: Repeated exposure may cause mild sensitization
CHRONIC SKIN CONTACT: Repeated exposure may cause slight sensitization
ACUTE INGESTION: LD₅₀ > 5 g/kg
CHRONIC INGESTION: Chronic exposure not likely from normal use
ACUTE INHALATION: LC₅₀ > 6.2 mg/l
CHRONIC INHALATION: Chronic exposure not likely from normal use
4. FIRST AID MEASURES:

FIRST AID FOR EYES: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Get medical attention.

FIRST AID FOR SKIN: Wash with soap and water. Remove contaminated clothing. Seek medical attention if irritation persists.

FIRST AID FOR INHALATION: Remove to fresh air. Seek medical attention if irritation persists.

FIRST AID FOR INGESTION: Swallowing less than one ounce will not cause significant harm. For larger amounts, do not induce vomiting, but give one or two glasses of water to drink and get medical attention.

5. FIRE FIGHTING MEASURES:

NFPA HAZARD CLASSIFICATION: HEALTH HAZARD 1  FIRE HAZARD 2

REACTIVITY: 0

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, alcohol or polymer foam.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

SPECIAL FIRE FIGHTING PROCEDURES: None

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES: Wear SCBA, rubber boots, and heavy rubber glove. Shut off sources of ignition. Dike around spill, adsorb on sand or similar, and place in closed containers for disposal. Ventilate area and wash spill site after material pick-up. Avoid run-off into storm sewers and ditches, which lead to waterways.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE (MIN. / MAX.): 55 / none °F  13 / none °C

SHELF LIFE: Stable for upwards of 2 year at ambient conditions.

SPECIAL SENSITIVITY: Keep from freezing

HANDLING AND STORAGE PRECAUTIONS: Do not store near heat or open flame.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

EYE PROTECTION REQUIREMENTS: The use of safety goggles is recommended

SKIN PROTECTION REQUIREMENTS: The use of chemical-resistant gloves is required
RESPIRATORY / VENTILATION REQUIREMENTS: Use with adequate ventilation

EXPOSURE LIMITS: None

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM: Liquid
COLOR: Brown
ODOR: Garlic
BOILING POINT RANGE: 310 °F (154 °C)
MELT POINT / FREEZE POINT: 55 °F (13 °C)
FLASH POINT: 347 °F (175 °C)
AUTO IGNITION: N/A

UPPER EXPLOSIVE LIMITS (UEL): Not determined
LOWER EXPLOSIVE LIMITS (LEL): Not determined
pH: 6.5-7.5
SOLUBILITY IN WATER: Dispersible
SPECIFIC GRAVITY: 0.914 g/ml
BULK DENSITY: N/A
% VOLATILE BY WEIGHT: 25
VAPOR PRESSURE at 20 °C: 2 mm Hg
VAPOR DENSITY: 0.012

10. STABILITY AND REACTIVITY:

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will not occur
INCOMPATIBILITIES: None noted
DECOMPOSITION PRODUCTS: None known
CONDITIONS TO AVOID: None

11. TOXICOLOGICAL INFORMATION:

Avoid breathing spray mist. In case of eye contact, flush eyes with plenty of water. If on skin, wash with soap and water. If irritation persists, get medical attention.

12. ECOLOGICAL INFORMATION:

Do not apply directly to water, or to areas where surface water is present, or to inter-tidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treatment area.

13. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHOD: Rinsewater and unused diluted product may be disposed of on-site or in an approved waste disposal facility.

14. TRANSPORTATION INFORMATION:

D.O.T. PROPER SHIPPING NAME: N/A
TECHNICAL SHIPPING NAME: Clarified hydrophobic extract of Neem Oil
D.O.T. HAZARD CLASS: N/A
U.N. /N.A. NUMBER .....................................................: N/A
PRODUCT RQ (lbs.) ..................................................: N/A
D.O.T. LABEL ............................................................: N/A
D.O.T. PLACARD .........................................................: N/A

15. REGULATORY INFORMATION:

OSHA STATUS ............................................................: N/A
TSCA STATUS .............................................................: N/A
CERCLA REPORTABLE QUANTITY .............................: N/A

SARA TITLE III:
SECTION 302 EXTREMELY
HAZARDOUS SUBSTANCES .................................: N/A
SECTION 311/312
HAZARD CATEGORIES ..............................................: N/A
SECTION 313
TOXIC CHEMICALS ......................................................: N/A

RCRA STATUS .............................................................: N/A

STATE REGULATORY INFORMATION:
The following chemicals are specifically listed by individual states; other product specific health and safety data in other
sections of the MSDS may also be applicable for state requirements. For detail on your regulatory requirements you
should contact the appropriate agency in your state.

COMPONENT NAME /
CAS NUMBER CONCENTRATION STATE CODE

16. OTHER INFORMATION:

REASON FOR ISSUE ..................................................: Updated CAS #
APPROVAL DATE ......................................................: 5/27/09
SUPERSEDES DATE ...................................................: 1/18/08
MSDS NUMBER ............................................................: 70051-2

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA nor any of its
subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final
determination of suitability of any material is the sole responsibility of the user. All material may present unknown health hazards and
should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that
exist.
OMRI Listed

The following product is OMRI Listed. It may be used in certified organic production or food processing and handling according to the USDA National Organic Program Rule.

Product
Trilogy® Fungicide/Miticide/Insecticide

Company
Certis USA
Regulatory Affairs Department
9145 Guilford Road, Suite 175
Columbia, MD 21046-1952

Status
Allowed with Restrictions

Category
NOP: Neem Extract and Derivatives

Product number
ttc-8073

Class
Crop Pest, Weed, and Disease Control

Issue date
01-Mar-1999

Expiration date
01-Dec-2017

Restrictions
May be used as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.

Peggy Mians
Executive Director

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the current OMRI Standards Manual®. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Products List® at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator’s responsibility to properly use the product, including following any restrictions.

Organic Materials Review Institute
P.O. Box 11558, Eugene, OR 97440-3758, USA
541.343.7600 • fax 541.343.8971 • info@omri.org • www.omri.org
ZeroTol® 2.0

SPECIMEN LABEL

Fungicide, Bactericide and Algacide
FOR HORTICULTURAL AND TURF USE ONLY

ACTIVE INGREDIENT:
Hydrogen Dioxide: 27.1%
Peracetic Acid: 2.0%
OTHER INGREDIENTS: 70.9%
TOTAL: 100%

KEEP OUT OF REACH OF CHILDREN
DANGER - PELIGRO
Si usted no entiende la etiqueta, busque a alguien para que le explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID:
If in eyes
• Hold eye open and rinse slowly and gently with water for 15-20 minutes.
• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
• Call a poison control center or doctor for treatment advice.

If on skin or clothing
• Take off contaminated clothing.
• Rinse skin immediately with plenty of water for 15-20 minutes.
• Call a poison control center or doctor for treatment advice.

If swallowed
• Call poison control center or doctor immediately for treatment advice.
• Have person sip a glass of water if able to swallow.
• Do not induce vomiting unless told to do so by the poison control center.
• Do not give anything by mouth to an unconscious person.

If inhaled
• Move person to fresh air.
• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
• Call poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency information on ZeroTol 2.0, call the National Pesticides Information Center at 1-800-858-7378, 6:30AM to 4:30 PM Pacific Time (PT), seven days a week. During other times, call the Poison Control Center at 1-800-222-1222.

NOTE TO PHYSICIAN:
Probable mucosal damage may contraindicate the use of gastric lavage.

Sold by: BioSafe Systems LLC
22 Meadow Street East Hartford, CT 06108
EPA Registration No. 70299-12
EPA Establishment No. 60156-LI-001

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS – DANGER:
Corrosive: Causes irreversible eye damage. Causes skin irritation or temporary discoloration on exposed skin. May be fatal if swallowed. Do not breathe vapor. Do not get in eyes, on skin or on clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE):
Handlers who may be exposed to the undiluted product through mixing, loading, application, or other tasks must wear: coveralls over long-sleeved shirt and long pants, rubber gloves, chemical resistant footwear plus socks, and protective eyewear (goggles or face shield). Handlers who may be exposed to the diluted through application or other tasks must wear: long-sleeved shirt and long pants, and shoes plus socks. Follow manufacturer’s instructions for cleaning/maintaining PPE. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:
Users should wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS:
This product is highly toxic to bees and other beneficial insects exposed to direct contact on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Do not apply this product or allow it to drift to crops where beneficials are part of an Integrated Pest Management strategy.

This pesticide is toxic to fish. Begin treatment along the shore and proceed outward in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is needed.

Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

Do not contaminate water when disposing of equipment washwaters or rinsates.

PHYSICAL AND CHEMICAL HAZARDS:
Corrosive. Strong oxidizing agent. Do not use in undiluted form. Mix only with water in accordance with label instructions. Never bring undiluted product in contact with other pesticides, cleaners or oxidative agents.

DIRECTIONS FOR USE:
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE), notification to workers, and Restricted-Entry Interval (REI). The requirements in this box only apply to the uses of this product that are covered by the Worker Protection Standard.
For enclosed environments:
There is a restricted entry of one (1) hour for this product when applied via fogging or spraying to growing plants, surfaces, equipment, structures and non-porous surfaces in enclosed glasshouses and greenhouses. PPE requirement for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is coveralls worn over long-sleeved shirt and pants, waterproof gloves and shoes plus socks.

There is a restricted entry of zero (0) hours for pre-plant dip, seed treatment, soil drench, mop, sponge, dip, soak, rinse or other non-spraying application methods when used in enclosed environments such as glasshouses and greenhouses.

For field applications:
Keep unprotected persons out of treated areas until sprays have dried.

Non-Agricultural Use Requirements
The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.


Use ZeroTol 2.0 to treat/control plant pathogens on bedding plants, flowering plants, roses, poinsettia, ornamentals, nursery stock, trees, turf, synthetic/artificial turf, cut flowers, bulbs, cuttings, seedlings, seeds and seedbeds.

Apply ZeroTol 2.0 to treat/control bacteria, fungi and algae on greenhouse structures, benches, pots, watering systems, evaporative coolers, storage rooms, ventilation equipment, floors and other equipment (optional text: turf equipment, irrigation systems and structures).

Solution Preparation:
ZeroTol 2.0 works best when diluted with water containing low levels of organic or inorganic materials and having a neutral pH (pH value of 7.0). pH can be measured using a pH meter or indicator test strips. Measuring total suspended solids and EC (Electrical Conductivity) can help in determining concentration of organic and inorganic content in the water. Thoroughly rinse out mixing tank with water before mixing. ZeroTol 2.0 will readily mix with clean, neutral water and does not require agitation.

ZeroTol 2.0 is formulated with minimal surfactant for plants having waxy or hairy surfaces. In order to increase the effectiveness of ZeroTol 2.0, additional non-ionic surfactant may be added, for treatment of plants with difficult to reach surfaces, or for plants having waxy or hairy surfaces. Only non-ionic surfactants are compatible with ZeroTol 2.0.

ZeroTol 2.0 works by surface contact with the plants and materials being treated. It is important to ensure that all surfaces are thoroughly wetted. ZeroTol 2.0 does not produce any visible residue, distinct odor or deleterious effects to plants when used in accordance with label directions.

Tank mixes of metal-based chemicals and ZeroTol 2.0 that have a pH of less than 7.0 may cause excessive foaming and phytotoxicity. Consult specific product labels for additional information or restrictions concerning tank mixing. Observe the most restrictive limitations and precautions of the labeling of all products used in mixtures.

ZeroTol 2.0 is a strong oxidizing agent and may react with residues of metal-based fungicides or supplements. Do not apply ZeroTol 2.0 as a foliar spray immediately following foliar applications of metal-based products. Allow at least 24 hrs. after application of metal-based products before applying ZeroTol 2.0 as a foliar spray. Check the label of the metal-based product prior to application for specific instructions for use with other fungicide products.

Note: Use spray solution the same day it is prepared, do not store and reuse mixed spray solution.

Compatibility:
ZeroTol 2.0 is compatible as a direct injection or tank-mix with many commonly used pesticides, fertilizers, adjuvants and non-ionic surfactants but has not been fully evaluated with all of these. Do not direct inject or tank mix ZeroTol 2.0 to the irrigation system or in spray tank with pesticides, surfactants or fertilizers before conducting a compatibility test to show it is physically compatible, effective and non-injurious under your use conditions.

To ensure compatibility, evaluate them prior to use as follows: Using a suitable container, add proportional amounts of product to water. Add wettable powders first, followed by water dispersible granules, then by liquid flowables and finally, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

Plant Sensitivity Testing:
For foliar applications, only use ZeroTol 2.0 at labeled dilutions. Solutions more concentrated than prescribed on this label may result in leaf necrosis for some plants (i.e., do not use dilutions less than 1:100 for foliar treatments). ZeroTol 2.0 has been designed to provide a balanced source of the active ingredient directly to the plant surface. ZeroTol 2.0 has been used and tested on many varieties of plant material; however, the nature of the target plant, environmental conditions, plant vigor, and the use of other pesticides can all affect plant sensitivity to ZeroTol 2.0. The safety of ZeroTol 2.0 has not determined on all plants and crops. Plants grown in greenhouses vary greatly from those grown under field conditions. Determine if ZeroTol 2.0 can be safely used prior to application. Before treating large numbers of plants, test ZeroTol 2.0 or tank mixes of ZeroTol 2.0 and other pesticides or fertilizers at labeled rates on a separate set of plants and observe for symptoms of sensitivity prior to use. Symptoms on foliage include yellow or brown spotting, “burned” tips and/or yellow or brown scorching along the leaf edges.

When using ZeroTol 2.0 for control of organisms living on the plant tissue (such as downy and powdery mildew), treatment may result in lesions on plant tissue. ZeroTol 2.0 will oxidize parasitic organisms living in plant tissue that are not always visible to the naked eye. Resulting oxidative effects may include spotting, or drying of the plant tissue where organisms inhabited tissue.

NOTE: ZeroTol 2.0 can be used on hydroponic growing systems as a foliar treatment when following the label directions for foliar treatments. ZeroTol 2.0 can be used as a hydroponic water treatment only after a water sample has been submitted to BioSafe Systems for analysis and special direction is provided for application recommendations. Inert growing media in a hydroponic growing system provide special conditions that the grower needs to adjust for due to the unbuffered water conditions. Water pH, EC and supplements such as fertilizer, biological loading and minor elements are factors that need to be considered before determining correct water treatment rates.

Before applying ZeroTol 2.0, thoroughly read the Directions for Use. Apply this product as directed. Do not use ZeroTol 2.0 above labeled rates.
USE RATES AND DIRECTIONS
FOR GREENHOUSE SURFACES AND EQUIPMENT

Use ZeroTol 2.0 to suppress / control bacteria, fungi and slime forming algae on greenhouse glazing, plastic, benches, walkways, floors, walls, fan blades, ventilation ducts, watering systems, coolers, storage rooms, and equipment.

1. Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt.

2. Use a dilution of 1:300 or ½ fl. oz per gallon of clean water. Use a dilution of 1:50 or 2½ fl. oz of ZeroTol 2.0 per gallon of clean water if surfaces that are to be treated have not been pre-cleaned with water to remove organic deposits. The use of additional surfactant is acceptable.

3. Apply solution with mop, sponge, power sprayer or fogger to thoroughly wet all surfaces.

4. Scrub off heavy growths of algae and fungi following application. Use a solution of ZeroTol 2.0 to wash away dead growth.

5. Reapply as often as needed for control.

Foaming Applications
Apply ZeroTol 2.0 as a foam treatment to enhance contact on porous surfaces and irregular surfaces, where contact is difficult to maintain with spray treatments. Use a dilution of 1:300 or ½ fl. oz per gallon of clean water. Use a dilution of 1:50 or 2½ fl. oz of ZeroTol 2.0 per gallon of clean water if surfaces to be treated have not been pre-cleaned with water to remove organic deposits. Add a surfactant foaming agent to the spray tank that contains the diluted ZeroTol 2.0 spray solution. Follow all mixing instructions on the label. Apply foam until the surface treated is completely covered. Allow foam treated surface to air dry. Do not rinse.

TREATMENT OF CLEAN, HARD NON-POROUS SURFACES

Use ZeroTol 2.0 to suppress / control bacteria, fungi and slime forming algae on the following surfaces:

<table>
<thead>
<tr>
<th>SURFACE</th>
<th>USE RATE</th>
<th>INSTRUCTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pots, Flats, Trays</td>
<td>1:100 - 1:300 or 1¼ fl. oz. -½ fl. oz. per gallon of clean water.</td>
<td>Spray until runoff. Add additional surfactant if needed.</td>
</tr>
<tr>
<td>Cutting Tools</td>
<td>1:100 - 1:300 or 1¼ fl. oz. -½ fl. oz. per gallon of clean water.</td>
<td>Soak tools to ensure complete coverage. Add additional surfactant if needed.</td>
</tr>
<tr>
<td>Tobacco Mosaic Virus control</td>
<td>1:50 - 1:100 or 2½ fl. oz. - ¼ fl. oz. per gallon of clean water.</td>
<td>Use ZeroTol 2.0 to prevent the spread of Tobacco Mosaic Virus on cutting tools. Allow surfaces to remain wet for 1 minute.</td>
</tr>
<tr>
<td>Benches and Work Areas</td>
<td>Precleaned surfaces: 1:100 - 1:300 or 1¼ fl. oz. -½ fl. oz. per gallon of clean water.</td>
<td>Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt. Add additional surfactant if needed.</td>
</tr>
<tr>
<td></td>
<td>Unclean surfaces: 1:50 or 2½ fl. oz. per gallon of clean water if surfaces have not been pre-cleaned with water to remove organic deposits.</td>
<td></td>
</tr>
<tr>
<td>Foot Bath Mats</td>
<td>1:100 - 1:170 or 1¼ fl. oz. -½ fl. oz. per gallon of water.</td>
<td>Apply ZeroTol 2.0 to prevent the tracking and spread of dirt and microorganisms. Make a solution of ZeroTol 2.0 per gallon of water and fill foot bath mat, foot pad or walk-through tray to capacity. Allow treated surface to remain wet with solution for 10 minutes. Change solution as needed.</td>
</tr>
<tr>
<td>Evaporative Coolers</td>
<td>Contaminated surfaces: 1:100 or 1¼ fl. oz. per gallon of clean water.</td>
<td>Treat algae and slime contaminated surfaces with a 1:100 dilution. Repeat as needed to obtain control.</td>
</tr>
<tr>
<td></td>
<td>Cooler water - 1:500 or ¼ fl. oz. for every gallon of cooler water.</td>
<td>Treat cooler water every week as a preventative treatment.</td>
</tr>
<tr>
<td>Irrigation Systems</td>
<td>Contaminated water: 1:500</td>
<td>Treat contaminated water with a dilution of 1:500 or ¼ fl. oz. for every gallon of water.</td>
</tr>
<tr>
<td></td>
<td>Clean water: 1:10,000</td>
<td>Treat clean water with a dilution of 1:10,000 or one gallon of ZeroTol 2.0 per 10,000 gallons of water.</td>
</tr>
</tbody>
</table>
SOIL OR MEDIA DRENCH

ZeroTol 2.0 is effective for the control / suppression of soil borne plant diseases such as Pythium, Phytophthora, Rhizoctonia, Thielaviopsis or Fusarium. Use as a soil drench at the time of seeding or transplanting, as well as a periodic drench throughout the plant’s life. ZeroTol 2.0 can also be used on potting soil and growing mediums prior to planting.

1. Use a dilution of 1:100 or 1½ fl. oz. per gallon of clean water.
2. Apply to soil or growing media to the point of saturation.
3. Wait fifteen minutes before planting or watering.
4. Apply every five to seven days as a preventative treatment.

PLANT TREATMENT

As A Foliar Spray Treatment In Greenhouses

ZeroTol 2.0 works immediately on contact with any plant surface for the control / suppression of fungi and bacteria such as Botrytis, Downey Mildew, Powdery Mildew, Xanthomonas. Apply ZeroTol 2.0 to ornamentals, bedding plants, flowering plants, shrubs, and trees. To ensure that this contact fungicide is effective, thorough coverage and wetting of the foliage is necessary.

Initial (Curative) Application:
1. Use a dilution of 1:100 or 1½ fl. oz. per gallon of clean water. Do not reuse already mixed solution, make fresh daily.
2. Spray, mist or fog plants in early morning or late evening.
3. Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks to ensure full contact with plant and flower tissue.
4. Apply consecutive applications until control is achieved and then follow directions for preventative treatment.

Weekly Preventative Treatment:
1. Use a dilution of 1:300 or ½ fl. oz. per gallon of clean water.
2. Spray, mist or fog plants.
3. Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks.
4. Spray every five to seven days as a preventative treatment.
5. At the first sign of disease spray daily with a 1½ fl. oz. per gallon of water for three consecutive days and then resume weekly preventative treatment.

For Mist Propagation Of Cuttings And Plugs

Inject ZeroTol 2.0 into misting systems to control / suppress algae, fungi and bacterial disease from becoming established on plant material. Inject ZeroTol 2.0 using a 1:1,000 dilution rate, for four to ten days on a consecutive basis. Reduce concentration to 1:5,000 and maintain continuous application throughout propagation cycle. At the first sign of disease, increase the concentration of ZeroTol 2.0 to 1:1,000.

As A Pre-Plant Dip Treatment

Use ZeroTol 2.0 for the control / suppression of damping-off, root and stem rot diseases such as Pythium, Phytophthora, Rhizoctonia, Fusarium, Penicilliurn, or Thielaviopsis on ornamental and nursery plants, seed beds, seeds, seedlings, bulbs, or cuttings.

1. Use 64 fl. oz. per 50 gallons of water, a dilution of 1:100.
2. Immerse plants or cuttings. Remove and allow to drain. Do not rinse.

For Cut Flowers

Use ZeroTol 2.0 to prevent Botrytis, Downy Mildew and Powdery Mildew on flowers in cold storage or in transit. Use a dilution of 1:500 or ¼ fl. oz. per gallon of clean water. Spray flowers after grading and prior to storage or shipment. Repeat weekly for flowers in storage.

As A Foliar Spray Treatment In Field Nurseries

ZeroTol 2.0 works immediately on contact with any plant surface for control / suppression of disease. Apply ZeroTol 2.0 to nursery stock such as: woody ornamentals, bedding plants, flowering plants, roses, container plants, azaleas, rhododendrons, conifers, and shade trees. Good coverage and wetting of the foliage is necessary.

Initial (Curative) Application:
1. Use a dilution of 1:100 or 1½ fl. oz. per gallon of clean water. Do not reuse already mixed solution, make fresh daily.
2. Spray, mist plants and trees, including applications through irrigation or chemigation systems.
3. Thoroughly wet all surfaces of plant, upper and lower foliage, including stems, branches and stalks to ensure full contact with plant and flower tissue.
4. If disease pressure continues, apply consecutive applications until control is achieved and then follow directions for preventative treatment.

Weekly Preventative Treatment:
1. Use a dilution of 1:300 –½ fl. oz. per 1,000 sq. ft. Use 5 gallons of solution per 1,000 sq. ft. Curative control

For Bareroot Nursery Stock

Use ZeroTol 2.0 to prevent Botrytis on budwood and nursery stock in storage. Use a dilution of 1:100 or 1⅛ fl. oz. per gallon of water. Dip plants or spray until dripping wet. Repeat weekly if necessary.

For Seed Bed Treatment

Use ZeroTol 2.0 for the control / suppression of disease as follows:
1. Prior to sowing seed, use a dilution of 1:100 - 1:200 or 1.3 to 0.64 fl. oz. per gallon of clean water. Thoroughly wet or drench the seedbed, to the point of saturation, with 60 to 100 gallons of dilute solution per 1,000 square feet. Let sit for one hour then immediately seed soil.
2. After seeds have germinated, use a dilution of 1:100 - 1:200 or 1.3 to 0.64 fl. oz. per gallon of clean water. Lightly spray or irrigate the soil and seedlings until thoroughly wetted. Retreat once per week until seed is well established.

For Soil Treatment, Pre-Inoculation With Beneficial Organisms

Use ZeroTol 2.0 to reduce the number of plant pathogenic organisms in the soil. Use a dilution of 1:100 - 1:200 or 1.3 to 0.64 fl. oz. per gallon of clean water. Pre-treat soil by thoroughly wetting or drenching with ZeroTol 2.0. Wait one day following treatment before inoculating the soil with beneficial organisms.

TURF TREATMENT

Use on well-established lawns, athletic fields, golf course fairways, greens and tees of Bentgrass, Bluegrass, Bermudagrass, Fescue, Ryegrass, St. Augustine grass and their mixtures to control / suppress algae, bacterial and fungal diseases, and the odors and conditions that these organisms may cause.

1. Use ZeroTol 2.0 to treat / prevent the bacterial / fungal conditions caused by Anthracnose, Brown Patch, Dollar Spot, Copper Spot, Summer patch, Strip Smut, Take-All Patch, Leaf Spot, Fusarium, Fairy Ring, Pink Snow Mold*, Pythium, Phytophthora, Rhizoctonia.
2. Average treatment rates involve treating approximately 1,000 square feet of turf area with 5 gallons of diluted solution. Add a spreader surfactant for best results. Optimum treatment time is early morning or late afternoon.
3. For best results, apply immediately after grass has been cut. Applications can be made during wet or rainy weather.
4. Inject ZeroTol 2.0 through automatic irrigation systems in turf areas. Refer to Chemigation Directions for Use for specific instructions on using this product through irrigation systems.

Curative Rate:
12 fl. oz. per 1,000 sq. ft. Use 5 gallons of solution per 1,000 sq. ft. Curative control
will require consecutive treatments to eradicate disease. Apply treatment until disease is controlled. Once control is achieved, follow directions for preventative rate. Combine with a systemic fungicide for residual suppression.

**Preventative Rate:**
6 fl. oz. per 1,000 sq. ft. Use 3 gallons per 1,000 sq. ft. Reapply as disease pressure warrants. This product may be tank mixed with compatible residual fungicides.

For soil-borne diseases, drench the soil to saturate the root systems in the areas affected, and use 5 – 10 gallons per 1,000 sq. ft.

For heavy algae growth, apply 12 - 25 fl. oz. per 1,000 sq. ft. Use 3 gallons per 1,000 sq. ft. and use 5 – 10 gallons of water per 1,000 sq. ft.

**ARTIFICIAL TURF TREATMENT**

Use ZeroTol 2.0 for the prevention and control of algae, fungi, moss, slime molds and their spores.

**Application Directions:**
1. Make a liquid solution of ZeroTol 2.0 at a rate of 1.25 fl. oz. for each gallon of water.
2. Spray evenly over area to be treated.
3. Allow treated area to remain wet for five minutes.
4. Allow to dry thoroughly before use.
5. Repeat treatment as needed.

**CHEMIGATION:**

**General Requirements:**
1. Apply this product only through a drip system or sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, hand move, flood (basin), furrow, border or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments as needed.
6. Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, inpatient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.
7. Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign must face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.
8. All words shall consist of letters at least 2.5 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

**Specific Requirements for Chemigation Systems Connected to Public Water Systems:**
1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system must be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
7. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
8. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
9. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
10. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
11. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
12. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

**Specific Requirements for Sprinkler Chemigation:**
1. The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being filled with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

**Specific Requirements for Flood (Basin), Furrow and Border Chemigation:**
1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.
2. The systems utilizing a pressurized water and pesticide injection system must meet the
Application Instructions:
1. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water until no scale or pesticide residues are present. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.
2. Determine the treatment rates as indicated in the directions for use and make proper dilutions.
3. Prepare a solution in the chemical tank by filling the tank with the required amount of water and then adding product as required. The product will immediately go into suspension without any agitation.
4. Do not apply ZeroTol 2.0 in conjunction with any other pesticides or fertilizers; this has the potential to cause reduced performance of the product.

PEC TICIDE DISPOSAL:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL (Containers greater than 5 gallons):
Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

PEC TICIDE STORAGE:
Store in original container in a cool, dry, well-ventilated area, away from direct sunlight. Do not allow product to become overheated in storage. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

CONTAINER DISPOSAL (Containers equal to or less than 5 gallons):
Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

STORAGE AND DISPOSAL:
Do not contaminate water, food, or feed by storage or disposal.

PEC TICIDE STORAGE:
Store in original container in a cool, dry, well-ventilated area, away from direct sunlight. Do not allow product to become overheated in storage. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

PEC TICIDE DISPOSAL:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL (Containers greater than 5 gallons):
Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

PEC TICIDE STORAGE:
Store in original container in a cool, dry, well-ventilated area, away from direct sunlight. Do not allow product to become overheated in storage. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

PEC TICIDE DISPOSAL:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL (Containers equal to or less than 5 gallons):
Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

PEC TICIDE STORAGE:
Store in original container in a cool, dry, well-ventilated area, away from direct sunlight. Do not allow product to become overheated in storage. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

PEC TICIDE DISPOSAL:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL (Containers greater than 5 gallons):
Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

PEC TICIDE STORAGE:
Store in original container in a cool, dry, well-ventilated area, away from direct sunlight. Do not allow product to become overheated in storage. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

PEC TICIDE DISPOSAL:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL (Containers equal to or less than 5 gallons):
Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

PEC TICIDE STORAGE:
Store in original container in a cool, dry, well-ventilated area, away from direct sunlight. Do not allow product to become overheated in storage. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

PEC TICIDE DISPOSAL:
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.
To the extent consistent with applicable law, in no event shall BIOSAFE SYSTEMS or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF BIOSAFE SYSTEMS AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF BIOSAFE SYSTEMS OR SELLER, THE REPLACEMENT OF THE PRODUCT.

BIOSAFE SYSTEMS and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of BIOSAFE SYSTEMS.

For additional information on ZeroTol® 2.0, Call us toll-free at 1.888.273.3088 or visit www.biosafesystems.com. ©2011 Copyright BioSafe Systems LLC. ZeroTol® 2.0 is a registered trademark of BioSafe Systems LLC. Always read and follow label directions. 11/11
1. IDENTIFICATION
Product Name: ZeroTol 2.0 ®
Product Type: Bactericide / Fungicide
Manufacturer: BioSafe Systems, LLC
22 Meadowview East Hartford, CT 06106
Creation Date: 07/2012
EPA Registration No.: 70229-12
EPA Establishment No.: 06744-IL-001

2. HAZARDOUS COMPONENTS
Hydrogen Dioxide ........................................ 7722-84-1
Peracetic Acid ................................................ 79-21-0

3. HEALTH HAZARDS DATA
Health effects to over exposure to CONCENTRATE:
Corrosive to mucous membranes, eyes and skin.
The seriousness of the lesions and the progression of
intoxication are directly proportional to the concentration
and duration of exposure.

Skin: May cause TEMPORARY skin discoloration and
irritation.
Eyes: May cause severe eye damage.

If Swallowed: Harmful. Inhalation: Causes chemical
bums of mouth, throat and stomach.
Corrosive to gastrointestinal tract.
Paleness and cyanosis of the face.
Excessive salivation, vomiting and
Irritability of stomach and intestines.
Nausea and vomiting.
Risk of chemical pneumonitis and pulmonary edema.

If Inhaled: Vapors or mist can cause irritation. People
with asthma or other lung problems may be more
affected.

4. FIRST AID
General Recommendations:
In case of product splashing in eyes, treat eyes first.
Submerge soiled clothing in water.
Contact physician in all cases.

Eyes: Hold eye open and rinse slowly and gently with
water for 15-20 minutes. Remove contact lenses, if
present, after the first 5 minutes, then continue rinsing
eyes. Call a poison control center or doctor for
emergency treatment advice.

Skin: Take off contaminated clothing. Rinse skin
immediately with plenty of water for 15-20 minutes.
Call a poison control center or doctor immediately for
emergency treatment advice. Have person sip a
glass of water if able to swallow. Do not induce
vomiting unless told to do so by poison control center or
doctor. Do not give anything by mouth to an
unconscious person.

If Inhaled: Move person to fresh air. If person is not
breathing, give artificial respiration. Call a
poison control center or doctor immediately for
treatment advice. Have the product container or label
with you when calling. If a poison control center or
doctor, or going for
treatment. You may also call 1-800-222-1222 for
emergency treatment information.

NOTE TO PHYSICIAN: Probable mucosal damage
may contraindicate use of gastric lavage.

5. FIRE AND EXPLOSION DATA
Special Fire Hazards: Product (concentrate) may
compose and will release oxygen whereby adding to
the fire hazard.
Fire Fighting Methods: Product is not flammable and
may be quickly diluted with clean water. Oxidizing
Agents may cause spontaneous ignition with oxidizing
agents.

6. SPILL OR LEAK PROCEDURES
Cleanup: Rinse small amounts to drain when possible.
Dike or dam large spills, pump to containers or soak
inert absorbent. Flush residue to sanitary sewer, rinse
area thoroughly with clean water. Avoid materials that
are incompatible with concentrate.

Waste Disposal: Consult state and local authorities
for restrictions on disposal of chemical wastes. Unused
product (concentrate) is classified as a (D002) by RCRA
criteria.

7. HANDLING AND STORAGE
Never return product back to the original container.
Keep concentrate away from reactive substances.
Prevent contact with organic materials.
Keep product in original container.
Store in cool, ventilated area.
Keep out of direct sunlight.
never use metal containers or spigots.
Use vented container.
Warn personnel of dangers of concentrated product
and allow adequate ventilation.

8. EXPOSURE CONTROLS / PERSONAL
PROTECTION
Respiratory: Avoid breathing mists or vapors of
concentrate.

Skin: Rubber gloves protective or gauntlet type preferred when
handling concentrate. Use aporns.

9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance: Clear, colorless liquid
Odor: Fungal
Freezing Point: -30°C (-22°F)
Boiling Point: Not applicable, product decomposes
Specific Gravity: 1.10
pH: 0.96
Solubility: Complete
Decomposition Temperature: self-accelerating
decomposition temperature > 55°C

10. STABILITY AND REACTIVITY
Stability: Stable under normal conditions, with slow
reactions.
Conditions to Avoid: Heat / Direct Sunlight
Materials to Avoid: Acids - Bases - Reducing Agents
Organic Materials - Metals - Salts of Metals

11. TOXICOLOGICAL INFORMATION
Acute Toxicology:
Acute oral toxicity: LD50, rat 3,622 mg/kg.
Test substance: 5.6% PAA, 20.9% H202, 7.6% HOAc
solution.
Acute dermal toxicity: LD50, rabbit, 1040 mg/kg.
Test substance: 6.8% PAA, 19.7% H202, 10% HOAc
solution.
Acute Inhalation toxicity: LC50, rat > 5.5 mg/L for
four hour exposure.
Test substance: 4.5% PAA, 27% H202, 16.7% HOAc
solution.
Primary eye irritation: rabbit, severely irritating.
Test substance: 2% PAA solution.
Primary dermal irritation: rabbit, severe irritant.
Test substance: 2% PAA solution.

Chronic Toxicity:
Dermal: > 12% solution, imparting effect.
Inhalation: 5 mg/m3, instant.
Route of entry: Inhalation / ingestion

12. ECOLOGICAL INFORMATION
Toxic to simple cell and aquatic organisms.
Exposure to the environment limited due to product
properties:
No bioaccumulation.
No soil degradation 99% in 20 minutes.
Considerable abiotic and biotic degradation.
Sediments: Non-significant adsorption.
Weak persistence of degradation products.
Degradation ion products: water and oxygen.

Acute Ecotoxicity:
Fish: Rainbow trout LC50, 48 hours > 40 mg/L
Crustaceans, EC 50, 48 hours 126.8 mg/l 1 mg/L
Bacteria: Pseudomonas aeruginosa, EC 100, 5
minutes, smg/l.

13. DISPOSAL CONSIDERATIONS
Store in original containers in a cool, well-ventilated
area, away from direct sunlight. Do not allow product to
be overheated in storage. This may cause increased
degradation of the product, which will decrease product
effectiveness. In case of spill, flood area with large
quantities of water. Do not store in a manner where cross-
contamination with other pesticides or fertilizers
might occur.

Wastes resulting from the use of this product may be
disposed of on site or at an approved waste disposal
facility. Open dumping is prohibited. If wastes cannot
be disposed of according to label directions, contact
your State Pesticide or Environmental Control Agency,
or your nearest EPA Regional Office for guidance.

Triple rinse (or equivalent). Then offer for recycling
or disposal in a sanitary landfill, or incineration, if
allowed by the local authorities by burning. Stay out of
smoke.

14. TRANSPORT INFORMATION
DOT: Shipping Name: Hydrogen peroxide and
derivatives of peroxo organic and peroxo acid mixture
stabilized.

UN Number: 3149

Hazard Class: 5.1
Primary Hazard Label: Oxidizer

15. REGULATORY INFORMATION

16. OTHER INFORMATION
To the extent of our knowledge, the information herein
is accurate as of the date of this document. However,
bioSafe Systems neither assumes any of its liabilities
make any warranty, expressed or implied, or accept any
liability in connection with the information or the use. The
information is for use by technically skilled persons
at their own discretion and risk. This is not a license or
patent. The user alone must determine suitability of
any information or material for any contemplated
use, the manner or use and whether any patents are
involved.

BioSafe Systems
For additional information on ZeroTol 2.0, call us toll-
free at 1-888-273-3088. © 2013 BioSafe Systems LLC.
BioSafe Systems LLC. ZeroTol 2.0 is a registered
trademark of BioSafe Systems LLC. Always read and follow
table directions. 07/12.
Product
ZeroTol 2.0 Fungicide, Bactericide and Algaecide

Company
BioSafe Systems
Lauren Crane
22 Meadow St
East Hartford, CT 06108

Status
Allowed with Restrictions

Category
NOP: Hydrogen Peroxide

Issue date
06-Aug-2015

Product number
bss-5846

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Dec-2017

Restrictions
May be used for plant disease control or as an algicide, disinfectant, or sanitizer if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices. May be used as an adjuvant or inert ingredient in passive pheromone dispensers.

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the current OMRI Standards Manual®. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Products List® at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator's responsibility to properly use the product, including following any restrictions.
CEASE®
AN AQUEOUS SUSPENSION BIOFUNGICIDE

FOR USE ON ORNAMENTALS, TREES, SHRUBS, SEEDLINGS, CONIFERS, AND GREENHOUSE VEGETABLES
USE IN FIELD APPLICATIONS, GREENHOUSES, GLASSHOUSES, NURSERIES, SHADE HOUSES, INTERIORSCAPES, SEEDLING PRODUCTION SITES, AND FOREST SEEDLING PRODUCTION SITES

Can Be Used for Organic Production

ACTIVE INGREDIENT:
QST 713 strain of Bacillus subtilis* .......... 1.34%
OTHER INGREDIENTS.......................... 98.66%
TOTAL........................................ 100.00%
*Contains a minimum of 1 x 10^9 cfu/g

KEEP OUT OF REACH OF CHILDREN
CAUTION

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS & DOMESTIC ANIMALS
CAUTION
Harmful if inhaled. Avoid breathing spray mist. Remove contaminated clothing and wash before reuse.

FIRST AID

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

Have the product label with you when calling a poison control center or doctor for treatment.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Applicators and other handlers must wear:
- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers/applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow manufacturer’s instructions for cleaning and maintaining PPE. If no such instructions are available, use detergent and hot water for washables. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS
When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides, the handler PPE requirements may be reduced or modified as specified in the WPS. IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for “applicators and other handlers” and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS
Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS
For terrestrial use: Do not apply directly to water, or to areas where surface water is present or to interstitial areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinse water. Do not apply when weather conditions favor drift or runoff from treated areas.

EMERGENCY INFORMATION
For MEDICAL AND TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577

DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

Exception: if the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:
- Coveralls
- Waterproof gloves
- Shoes plus socks
NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Post harvest treatment of harvested agricultural plants does not fall within the scope of the WPS. An agricultural plant is considered harvested when 1) a desirable portion of the agricultural plant (seed, fruit, flower, stem, foliage or roots) is detached from its parent or 2) a whole agricultural plant is separated from its growth media (soil, water, or other media).

PPE for applicators treating portions of harvested agricultural plants or handlers exposed to treated portions of harvested agricultural plants is waterproof gloves.

Keep unprotected persons from handling portions of harvested agricultural plants that have been treated until sprays have dried.

Commercial Treatment of plants that are in ornamental gardens, parks, golf courses, and public or residential turf and grounds, and that are intended only for aesthetic purposes or climatic modification.

Keep unprotected persons out of treated areas until sprays have dried.

GENERAL USE INFORMATION

CEASE is a broad spectrum, preventative product for the control or suppression of many important plant diseases. Apply CEASE as a foliar spray alone, in alternating spray programs or in tank mixes with other registered crop protection products. Apply CEASE as a soil drench alone, in alternating spray programs or tank mixes with other registered crop protection products. When conditions are conducive to heavy disease pressure, use CEASE in a rotational program with other registered fungicides. Apply CEASE with spray equipment commonly used for making ground or aerial applications and sprinkler/irrigation systems commonly used for chemigation. Heavy rainfall or irrigation shortly after application may require retreatment. CEASE can be used for organic production.

CEASE is most effectively used in a preventive disease management program. For improved performance, use CEASE in a tank-mix or rotational program with other registered fungicides. When using CEASE alone for the first time, use a rate of 4 qt. CEASE per acre. Increase the application rate and/or decrease spray intervals of CEASE depending on disease pressure. To enhance performance, consider adding a surfactant, known to be safe to the target crop, to the spray tank to improve penetration and coverage of above-ground portions of the plant.

INTEGRATED PEST MANAGEMENT (IPM)

Integrate CEASE into an overall disease and pest management strategy whenever fungicide use is necessary. Follow practices known to reduce disease development. Consult local agricultural authorities for specific IPM strategies developed for your crop(s) and location.

Be sure use of this product conforms to resistance management strategies, which may include rotating and/or tank mixing with other products with different modes of action.

USE RATE DETERMINATION

Carefully read and follow all label directions, use rates and restrictions. Application of CEASE prior to or in the early stages of disease development provides the best control or suppression of the targeted plant disease. Use maximum label rates and shortened spray intervals for conditions conducive to threatening or rapid disease development. For proper application, determine the number of acres to be treated, the label use rate and select appropriate gallonage to give good canopy penetration and coverage of plant parts to be protected. Prepare only the amount of spray solution required to treat the measured acreage. Accurate spray equipment calibration is essential prior to use.

PREHARVEST INTERVAL

CEASE can be applied up to and including the day of harvest.

APPLICATION INSTRUCTIONS

GENERAL: Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower/treatment coordinator are responsible for considering all of these factors when making decisions. Where states have more stringent regulations, they should be observed. Note: This section is advisory in nature and does not supersede the mandatory label requirements.

GROUND: Be sure to maintain agitation during mixing and application to assure uniform product suspension. Thorough coverage of all foliage is essential for effective disease control. CEASE can be applied in commonly used ground equipment, hose-end, pressurized greenhouse, and hand-held sprayers. To achieve good coverage use proper spray pressure, gallonage per acre, nozzle, nozzle spacing and ground speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

AERIAL: This product can be applied by aerial application. Refer to the Aerial Drill Reduction Advisory Information section of this label for general directions and precautions. Use the application rate indicated for the appropriate crop in sufficient water to achieve thorough coverage, typically between 3 – 20 gallons of water per acre depending upon the crop. Three gallons of water per acre is the minimum.

CHEMIGATION: This product can be applied through sprinkler (center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, and hand move) or drip type irrigation systems. Refer to the Chemigation Directions for Use section of this label for general directions and precautions. Use the application rate indicated for the appropriate crop as specified in the Application Rate tables of this label.

MIXING INSTRUCTIONS

MIXING: CEASE must be diluted with water. Partially fill the spray tank with clean water and begin agitation. Add the specified amount of CEASE to the tank. Finish filling the tank to the desired volume to obtain the proper spray concentration. It is critical that the spray solution be agitated during mixing and application to assure a uniform suspension. Do not allow spray mixture to stand overnight or for prolonged periods. Maintain a spray solution pH between 4.5 and 8.5.

CEASE may be tank-mixed with other registered pesticides to enhance plant disease control. This product is not to be mixed with any product with prohibition against such mixing. When tank-mixing CEASE with other registered pesticides, always read and follow all use directions, restrictions, and precautions of both CEASE and the tank-mix partner(s). Use of the resulting tank mix must be in accordance with the more restrictive label limitations and precautions. Do not exceed label dosage rates.

COMPATIBILITY: Do not combine CEASE in the spray tank with pesticides, surfactants or fertilizers if there has been no previous experience or use of the combination to show it is physically compatible, effective and non-injurious under your use conditions.

CEASE is compatible with many commonly used pesticides, fertilizers, adjuvants and surfactants but has not been fully evaluated with all of these. To ensure compatibility of tank-mix combinations, evaluate them prior to use, as follows: Using a suitable container add proportional amounts of product to water. Add wettable powders first, followed by water dispersible granules, then by liquid flowables and lastly, emulsifiable concentrates. Mix thoroughly and let stand for at least five minutes. If the combination stays mixed or can be remixed, it is physically compatible. Test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a
result of application.

ADDITIVES: CEASE is compatible with a wide range of additives. Since the product is primarily a protectant, thorough coverage of all above-ground plant parts is required for effective product performance. To improve plant surface coverage, add a non-phytotoxic surfactant to spray tank.

CHEMIGATION DIRECTIONS FOR USE

General Requirements:
1) Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, travelor, solid set or hand move) or drip type irrigation systems. Do not apply this product through any other type of irrigation system.
2) Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.
3) Ensure the irrigation system used is properly calibrated and if you have questions, call the State Extension Service, the equipment manufacturer or other experts.
4) Do not connect an irrigation system (including greenhouse systems) used for pesticidal application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5) A person knowledgeable of the chemigation system and responsibilities be on site for operation, or under the supervision of the responsible person, shall shut the system down and make any necessary adjustments should the need arise.

Requirements for Chemigation Systems connected to Public Water Systems:
1) Public water supply means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of 25 individuals daily at least 60 days throughout the year.
2) Chemigation systems connected to the public water systems must contain a functional, reduced-pressure zone (RPZ), backflow preventer or the functional equivalent in the water supply upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top of the overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3) The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back towards the injection pump.
4) The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the injection system is either automatically or manually shut down.
5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point at which pesticide distribution is adversely affected.
6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7) Do not apply when wind speed favors drift beyond the area intended for treatment.
8) Do not apply when wind speed favors drift beyond the area intended for treatment.
9) Do not combine CEASE with pesticides, surfactants or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective and non-injurious under conditions of use. CEASE has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if mixture with adjuvants or surfactants is planned.
10) Maintain agitation in the pesticide supply tank.
11) Apply CEASE during the last half of the water application.
12) Dilute CEASE in enough water to be able to draw through system for the last half of the water application.

Sprinkler Chemigation Requirements:
1) The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
2) The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back towards the injection pump.
3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the injection system is either automatically or manually shut down.
4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5) The irrigation line of water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7) Do not apply when wind speed favors drift beyond the area intended for treatment.
8) Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injection system. Flush with clean water. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.
9) Do not combine CEASE with pesticides, surfactants or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective and non-injurious under conditions of use. CEASE has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if mixture with adjuvants or surfactants is planned.
10) Maintain agitation in the pesticide supply tank.
11) Apply CEASE during the last half of the water application.
12) Dilute CEASE in enough water to be able to draw through system for the last half of the water application.

Center-pivot, Lateral Move, End Tow, and Traveler Irrigation Equipment (Use only with electric or oil hydraulic drive systems which provide a uniform water distribution):
- Determine size of area to be treated.
- Determine the time required to apply no more than 1/4 inch of water (6,750 gallons water per acre) over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run system at 80 to 95% of manufacturer’s system pressure.
- Using only water, determine the injection pump output when operated at normal line pressure.
- Determine the amount of CEASE fungicide required to treat area.
- Determine the amount of CEASE fungicide and sufficient water to meet the injection time requirements of the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Stop injection equipment after treatment is completed. Continue to operate the system until CEASE fungicide solution has cleared the sprayer head.

Solid-set, Side (wheel) Roll, and Hand Move Irrigation Equipment:
- Determine acreage covered by sprinkler.
- Fill injector solution tank with water and adjust flow rate to use contents over a 10- to 30-minute interval.
- Determine the amount of CEASE fungicide required to treat area.
- Add the required amount of CEASE fungicide into the same quantity of water used to calibrate the injection equipment.
- Maintain constant solution tank agitation during the injection period.
Operate system at normal pressures recommended by the manufacturer of the injection equipment and used for the time interval established during calibration.

Inject CEASE fungicide at the end of the irrigation cycle or as a separate application to maximize foliar fungicide retention.

Stop injection equipment after treatment is completed. Continue to operate the system until CEASE fungicide solution has cleared the last sprinkler head.

**Drip Chemigation Requirements**

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.

2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

4. The system must contain functional inter-locked controls to automatically shut off the pesticide injection pump when the water pump motor stops.

5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

6. Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injection system. Flush with clean water. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.

8. Do not combine CEASE with pesticides, surfactants or fertilizers for application through chemigation equipment unless prior experience has shown the combination physically compatible, effective and non-toxic under conditions of use. CEASE has not been fully evaluated for compatibility with all adjuvants or surfactants. Conduct a spray compatibility test if mixture with adjuvants or surfactants is planned.

9. Maintain agitation in the pesticide supply tank.

10. Apply CEASE during the last half of the water application.

11. Dilute CEASE in enough water to be able to draw through system for the last half of the water application.

**AERIAL DRIFT REDUCTION ADVISORY INFORMATION**

**General:** Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. Where states have more stringent regulations, they should be observed. Note: This section is advisory in nature and does not supersedes the mandatory label requirements.

**INFORMATION ON DROPLET SIZE:** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

**CONTROLLING DROPLET SIZE:**

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets. **Pressure:** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, higher pressure produces larger droplets. When high flow rates are needed, use higher flow rate nozzles instead of increasing pressure. **Nozzles:** Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation:** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential. **Nozzle Type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

**Boom Width:** For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3 - 10 mph as measured by an anemometer. Use medium or coarser sprays according to ASAE S75 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or the crop canopy.

**Application Height:** Do not make application at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upward. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:** Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions:** Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that lingers and moves laterally in a concentrated cloud under low wind conditions indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas:** The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal. If wind is blowing away from the sensitive area(s). Do not allow spray to drift from the application site and contact people, structures, vegetation, and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.
### Application Rates of CEASE for Selected Greenhouse Crops

<table>
<thead>
<tr>
<th>Greenhouse Crops</th>
<th>Disease</th>
<th>Rate qu/100 gallons spray mix</th>
<th>Application Instructions</th>
</tr>
</thead>
</table>
| **Brassica**     | Pin Rot Complex
Alternaria/Xanthomonas | 3.6 | Pin Rot - For suppression, begin application when environmental conditions in the greenhouse are conducive to rapid disease development and repeat on a 7 to 10 day interval or as needed. For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides for Pin Rot control. |
| Broccoli         | Bacterial Leaf Spot
Pseudomonas syringae | 3.6 | For all other diseases - Begin application soon after emergence or transplant and when conditions in the greenhouse are conducive to disease development. Repeat on a 7 to 10 day interval or as needed. |
| Cabbage          | Black Rot
Erwinia / Pseudomonas | 3.6 | |
| Cauliflower      | Black Rot
Xanthomonas | | |
| Brussels Sprouts | Black Rot
Xanthomonas | | |
| Collards         | Black Rot
Xanthomonas | | |
| Kale             | Black Rot
Xanthomonas | | |
| Mustard Greens   | Black Rot
Xanthomonas | | |
| Kohlrabi and other brassica crops | Black Rot
Xanthomonas | | |
| **Bulb Vegetables** | Botrytis neck rot
Botrytis spp. | 3.6 | Begin application when environmental conditions in the greenhouse are conducive to disease development and repeat on a 7 to 10 day interval or as needed. When conditions in the greenhouse are conducive to rapid disease development, use CEASE in a rotational program with other registered fungicides. Thorough coverage is essential. |
| Onion            | Botrytis Leaf Blight
Botrytis squamosa | 3.6 | |
| Garlic           | Onion Purple Blotch
Alternaria porri | | |
| Shallots and other bulb vegetables | Onion Downy Mildew
Peronospora destructor | | |
|                | Downy Mildew
Peronospora spp. | | |
|                | Powdery Mildew
Erysiphe spp. | | |
| **Cucurbits**    | Rust
Puccinia porri | 3.6 | For suppression, begin application when conditions are conducive to disease development and repeat on a 7 to 10 day interval or as needed. For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides for Rust control |
| Cucumber         | Angular Leaf Spot
Pseudomonas syringae | 3.6 | |
| Cantaloupe       | Anthracnose
Colletotrichum lagenarium | | |
| Melon            | Bacterial Fruit Blotch
Acidovorax avenae | | |
| Muskmelon        | Downy Mildew
Pseudomonospora cubensis | | |
| Squash           | Gummy Stem Blight
Phoma cucurbitaevarum Didyrmelis bryonae | | |
| Watermelon and other cucurbits | Powdery Mildew
Erysiphe spp. | | |
<p>| | Sphaerotheca spp. | | |</p>
<table>
<thead>
<tr>
<th>Greenhouse Crops</th>
<th>Disease</th>
<th>Rate qu/100 gallons spray mix</th>
<th>Application Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruiting Vegetables</td>
<td>Gray mold</td>
<td><em>Botrytis cinerea</em></td>
<td>3-6</td>
</tr>
<tr>
<td></td>
<td>Downy Mildew</td>
<td><em>Pseudoperonospora cubensis</em></td>
<td>3-6</td>
</tr>
<tr>
<td></td>
<td>Powdery mildew</td>
<td><em>Leveillula taurica</em> <em>Oidiopsis taurica</em></td>
<td>3-6</td>
</tr>
<tr>
<td></td>
<td>Bacterial Spot</td>
<td><em>Xanthomonas</em> spp.</td>
<td>3-6</td>
</tr>
<tr>
<td></td>
<td>Target Spot</td>
<td><em>Corynespora cassiicola</em></td>
<td>3-6</td>
</tr>
<tr>
<td></td>
<td>Early Blight</td>
<td><em>Alternaria solani</em></td>
<td>3-6</td>
</tr>
<tr>
<td></td>
<td>Late Blight</td>
<td><em>Phytophthora infestans</em></td>
<td>3-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Bacterial Blight</em></td>
<td><em>Pseudomonas syringae</em></td>
</tr>
<tr>
<td>Greenhouse Crops</td>
<td>Diseases</td>
<td>Rate q/100 gallons spray mix</td>
<td>Application Instructions</td>
</tr>
<tr>
<td>------------------</td>
<td>----------</td>
<td>----------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Leafy Vegetables</td>
<td>Sclerotinia Head and Leaf Drop&lt;br&gt;Sclerotinia spp.</td>
<td>3-6</td>
<td>For control of early Sclerotinia Head and Leaf Drop: Apply at planting or immediately following planting but prior to crop emergence as a 4- to 6-inch seed line treatment. Make a second application as a directed spray with multiple nozzles per each seed line in sufficient water to ensure thorough coverage of lower plant leaves and surrounding soil surface within 7 days of thinning. Repeat applications on 10 to 14 day intervals if conditions for disease development persist. Use higher rates under conditions conducive to moderate to severe disease pressure. Light irrigation after application to incorporate the product may improve disease control. OR&lt;br&gt;For control of Sclerotinia Head and Leaf Drop: Apply as a directed spray with multiple nozzles per each seed line in sufficient water to ensure thorough coverage of lower plant leaves and surrounding soil surface within 7 days of thinning or transplanting. Repeat applications on 10 to 14 day intervals if conditions for disease development persist. Use higher rates under conditions conducive to moderate to severe disease pressure. Light irrigation after application to incorporate the product may improve disease control.</td>
</tr>
<tr>
<td>Root / Tuber Crops</td>
<td>Black Root Rot/Black Crown Rot&lt;br&gt;Alternaria spp.</td>
<td>3-6</td>
<td>Begin application soon after emergence or transplant and when environmental conditions are conducive to disease development. Repeat on a 7 to 10 day interval or as needed. Thorough coverage is essential.</td>
</tr>
<tr>
<td>Root and Tuber Crops</td>
<td>Bacterial Leaf Blight&lt;br&gt;Xanthomonas campestris</td>
<td>3-6</td>
<td>Begin application soon after emergence or transplant and when conditions are conducive to disease development. Repeat on a 7 to 10 day interval or as needed. Use high rates and shorter intervals when conditions are conducive to rapid disease development. Thorough coverage is essential.</td>
</tr>
<tr>
<td>Strawberry</td>
<td>Anthracnose&lt;br&gt;Colletotrichum acutatum&lt;br&gt;Angular Leaf Spot&lt;br&gt;Xanthomonas fragariae&lt;br&gt;Botrytis&lt;br&gt;Botrytis cinerea&lt;br&gt;Gray Mold&lt;br&gt;Botrytis spp.&lt;br&gt;Powdery Mildew&lt;br&gt;Sphaerotheca macularis&lt;br&gt;Erysiphe spp.</td>
<td>3-6</td>
<td>Anthracnose - Begin application prior to disease development and repeat on a 7 to 10 day interval or as needed.&lt;br&gt;Angular Leaf Spot - Begin application when conditions are conducive to disease development. Continue sprays at 7 to 10 day intervals or as needed. Use high rates and shorter intervals when conditions are conducive to rapid disease development.&lt;br&gt;Botrytis/Powdery Mildew - For suppression, begin application at or before flowering and repeat on a 7 to 10 day interval or as needed through harvest.&lt;br&gt;For all diseases - For improved performance, use CEASE in a tank mix or rotational program with other registered fungicides. Thorough coverage is essential. CEASE may be applied up to and including the day of harvest.</td>
</tr>
</tbody>
</table>
FOR USE ON ORNAMENTALS, TREES, SHRUBS, FLOWERS, BEDDING PLANTS, TROPICAL PLANTS (ORNAMENTALS - Poinsettia, Orchids, Dieffenbachia, Palms, Spathiphyllum, Raphiolepis, Aglaonema and FRUIT – Bananas, Mangos, Papaya), SEEDLINGS, CONIFERS - Agricultural, Commercial, and Reforestation.

CEASE has a 0-Day Pre-Harvest interval for all crops contained on this label. Under moderate to severe disease pressure, for improved performance, increase rates and reduce spray intervals or use CEASE in a tank mix or rotational program with other registered fungicides.

CEASE is a protectant fungicide for use indoors and outdoors for control of certain foliar diseases in the field, greenhouses (open or enclosed), interiorscapes, and commercial landscapes, nurseries (open or enclosed), shade house environments, glasshouses, seedling production sites, forests, and forestry seedling production sites.

CEASE can be applied to ornamentals, trees, shrubs, flowers, annual and perennial bedding plants, potted flowers, cut flowers, tropical foliage, container grown trees and shrubs, forestry seedlings, and conifer production for reforestation purposes (greenhouses, shade houses, nurseries, indoors, outdoors, containers or field).

PLANTS EVALUATED FOR PHYTOTOXICITY
CEASE has been tested for phytotoxicity on the ornamental species listed below. Since it is impossible to test all of the species and cultivars listed on this label under all conditions, it is recommended that a small-scale preliminary trial be conducted to check for sensitivity before using this product on a large number of plants, using the product in accordance with all label use directions.

<table>
<thead>
<tr>
<th>TABLE OF PLANTS EVALUATED FOR PHYTOTOXICITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual and Perennial Flowering Plants:</strong></td>
</tr>
<tr>
<td>Alyssum</td>
</tr>
<tr>
<td>Begonia</td>
</tr>
<tr>
<td>Cyclamen</td>
</tr>
<tr>
<td>Easter lily</td>
</tr>
<tr>
<td>Gerbera</td>
</tr>
<tr>
<td>Impatiens</td>
</tr>
<tr>
<td>Lisanthus</td>
</tr>
<tr>
<td>Orchids</td>
</tr>
<tr>
<td>Poinsettia</td>
</tr>
<tr>
<td>Roses</td>
</tr>
<tr>
<td>Stock</td>
</tr>
<tr>
<td>Violas</td>
</tr>
<tr>
<td>Azalea</td>
</tr>
<tr>
<td>Asters</td>
</tr>
<tr>
<td>Calla lily</td>
</tr>
<tr>
<td>Calla lily</td>
</tr>
<tr>
<td>Chrysanthemium</td>
</tr>
<tr>
<td>Dianthus</td>
</tr>
<tr>
<td>Gardenia</td>
</tr>
<tr>
<td>Gardenia</td>
</tr>
<tr>
<td>Golden star</td>
</tr>
<tr>
<td>Kalanchoe</td>
</tr>
<tr>
<td>Kalanchoe</td>
</tr>
<tr>
<td>Lobelia</td>
</tr>
<tr>
<td>Lobelia</td>
</tr>
<tr>
<td>Lobelia</td>
</tr>
<tr>
<td>Linaria</td>
</tr>
<tr>
<td>Linaria</td>
</tr>
<tr>
<td>Margolds</td>
</tr>
<tr>
<td>Marigolds</td>
</tr>
<tr>
<td>Petunia</td>
</tr>
<tr>
<td>Petunia</td>
</tr>
<tr>
<td>Ranunculus</td>
</tr>
<tr>
<td>Ranunculus</td>
</tr>
<tr>
<td>Snapdragon</td>
</tr>
<tr>
<td>Snapdragon</td>
</tr>
<tr>
<td>Vinca</td>
</tr>
<tr>
<td>Spathiphyllum</td>
</tr>
<tr>
<td>Tropical foliage:</td>
</tr>
<tr>
<td>Aglaonema</td>
</tr>
<tr>
<td>Dracaena spp.</td>
</tr>
<tr>
<td>Hibiscus</td>
</tr>
<tr>
<td>Hydrangea</td>
</tr>
<tr>
<td>Linaria</td>
</tr>
<tr>
<td>Linaria</td>
</tr>
<tr>
<td>Margolds</td>
</tr>
<tr>
<td>Marigolds</td>
</tr>
<tr>
<td>Petunia</td>
</tr>
<tr>
<td>Petunia</td>
</tr>
<tr>
<td>Ranunculus</td>
</tr>
<tr>
<td>Ranunculus</td>
</tr>
<tr>
<td>Snapdragon</td>
</tr>
<tr>
<td>Snapdragon</td>
</tr>
<tr>
<td>Vinca</td>
</tr>
<tr>
<td>Azalea</td>
</tr>
<tr>
<td>Crape myrtle</td>
</tr>
<tr>
<td>Gumbo azalea</td>
</tr>
<tr>
<td>Japanese maple</td>
</tr>
<tr>
<td>Lilac</td>
</tr>
<tr>
<td>Photinia</td>
</tr>
<tr>
<td>Spirea</td>
</tr>
<tr>
<td>Boxwood</td>
</tr>
<tr>
<td>Dogwood</td>
</tr>
<tr>
<td>Indian (India) Hawthorn</td>
</tr>
<tr>
<td>Ligustrum japonicum</td>
</tr>
<tr>
<td>Loropetalum</td>
</tr>
<tr>
<td>Soft Touch Holly</td>
</tr>
<tr>
<td>Dieffenbachia</td>
</tr>
<tr>
<td>English Ivy</td>
</tr>
<tr>
<td>Leatherleaf Form</td>
</tr>
</tbody>
</table>
**Foliar Application Use on Ornamentals, Trees, Shrubs, Flowers, Bedding Plants, Tropical Plants, Seedlings, Conifers:**

**APPLICATION INSTRUCTIONS:** Apply CEASE at rates ranging from 2 to 8 quarts of product in 100-300 gallons of water per acre. Make applications on a 3 to 10 day schedule. Begin applications when conditions favor disease development prior to the onset of disease. Begin applications prior to or in the early stages of disease development.

Under normal conditions apply CEASE at a rate of 4 quarts of product per 100-300 gallons of spray solution per acre on a 7-day schedule. When conditions favor severe disease development shorten the spray interval or use a higher rate. Thorough coverage is essential for effective disease control. When more diluted or concentrated spray solutions are needed for the type of equipment being used, follow the “Use Rate Determination” section of this label. See application rate tables for more detailed application instructions.

<table>
<thead>
<tr>
<th>Crops</th>
<th>Disease</th>
<th>Rate qts/100 gallons spray mix</th>
<th>Application Instructions</th>
</tr>
</thead>
</table>
| Ornamentals<br> Trees, Shrubs, Flowering Plants, and Tropical Plants<br> Fields, Outdoors, Indoors, Greenhouses, Nurseries<br> Annuals<br> Perennials<br> Bedding plants<br> Potted flowers<br> Cut flowers<br> Foliage plants<br> Deciduous trees<br> Deciduous shrubs<br> Tropical foliage<br> Container grown plants<br> Conifer production for reforestation purposes | Anthracnose<br> *Colletotrichum* spp.<br> Bacteria<br> *Erwinia* spp.<br> *Pseudomonas* spp.<br> *Xanthomonas* spp.<br> Black spot of rose<br> *Diplocarpon rosae*<br> Botrytis<br> *Botrytis cinerea*<br> Downy Mildew<br> *Peronospora* spp.<br> Leaf spots<br> *Alternaria* spp.<br> *Cercospora* spp.<br> *Entomosporium* spp.<br> *Helminthosporium* spp.<br> *Myrothecium* spp.<br> *Septoria* spp.<br> Powdery Mildew<br> *Erysiphe* spp.<br> *Oidium* spp.<br> *Podosphaera* spp.<br> *Sphacelotheca* spp.<br> Phytophthora spp.<br> Rust<br> *Puccinia* spp.<br> Scab<br> *Venturia* spp. | 2-8 | Indoors, Outdoors, Field, Greenhouse, Nursery Grown Plants: Apply CEASE at rates ranging from 2-8 quarts of product in 100-300 gallons of water per acre. Make applications on a 3- to 10-day schedule. Begin applications when conditions favor disease development prior to the onset of disease.

Under normal conditions apply CEASE at a rate of 4 qt of product per 100 gallons of spray solution per acre on a 7-day schedule. When conditions favor severe disease development shorten the spray interval or use a higher rate. Thorough coverage is essential for effective disease control. When more diluted or concentrated spray solutions are needed for the type of equipment being used, follow the “Use Rate Determination” section of this label.
**Post Harvest Dip Use on Cut Flowers/Buds:**

**APPLICATION INSTRUCTIONS:** For post-harvest dip applications on cut flower crops, dip cut flowers/buds in a solution containing 6 to 25 fl oz of CEASE in 10 gallons of water soon after cutting. Immerses flowers for a period sufficient to provide thorough contact between cut flower/bud and the treatment solution. Use higher rates under conditions of heavy disease pressure.

See application rates tables for rates and application instructions.

<table>
<thead>
<tr>
<th>Crops</th>
<th>Disease</th>
<th>Rate fl oz/10 gallons</th>
<th>Application Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut Flowers</td>
<td>Black spot of rose <em>Diplocarpon rosea</em></td>
<td>6 - 25</td>
<td>Dip cut flowers/buds in a solution containing 6 to 25 fl oz of CEASE in 10 gallons of water soon after cutting. Immerses flowers for a period sufficient to provide thorough contact between cut flower/bud and the treatment solution. Use higher rates under conditions of heavy disease pressure.</td>
</tr>
<tr>
<td></td>
<td>Black spot of rose <em>Botrytis cinerea</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Downy Mildew <em>Peronospora spp.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Powdery mildew <em>Erysiphe spp.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Powdery mildew <em>Cidium spp.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Powdery mildew <em>Podosphaera spp.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Powdery mildew <em>Sphaerotheca spp.</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Soil Drench Applications on Ornamentals, Trees, Shrubs, Flowers, Bedding Plants, Tropical Plants, Seedlings, Conifers, Fruits and Vegetables: Agricultural, Commercial, Residential Use, Interiorscapes, Indoors and Outdoors, Greenhouses, Glasshouses, Nurseries, (Open and Enclosed)**

CEASE is a broad spectrum biofungicide for the prevention, suppression and control of soil borne diseases on a wide range of annual and perennial bedding plants, potted flowers, foliage plants, deciduous trees and shrubs, fruits and vegetables and in conifer production. CEASE enhances germination and plant growth by suppressing diseases caused by Rhizoctonia, Pythium, Fusarium, and Phytophthora.

**APPLICATION INSTRUCTIONS:** Mix 4 qt to 8 qt of CEASE with 100 gallons of water. Use higher application rates under conditions of heavy disease pressure. Apply finished mixture at a rate to thoroughly soak the growing media through the root zone (1 pint finished mixture/sq ft for each 3 inches of soil depth) as a drench or direct spray using hand held, mechanical or motorized spray equipment, or as a chemigation drench or directed spray using applicable sprinkler irrigation systems. Begin applications during or after seeding, staking of cuttings or after transplanting to propagation beds, containers, pots or trays. Optimal performance is obtained with preventative treatments repeated every 21 - 28 days throughout the growing cycle. CEASE can be mixed with chemical fungicides registered for soil applications.

See application rate tables for more detailed application instructions.

<table>
<thead>
<tr>
<th>Crops</th>
<th>Disease</th>
<th>Rate qt/100 gallons spray mix</th>
<th>Application Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ornamentals, Trees, Shrubs, Foliage Plants</td>
<td>Rhizoctonia <em>spp.</em></td>
<td>4 - 8</td>
<td>Soil Drench Uses: Field, Interiorscape, Greenhouses, Glasshouses, Shadehouses, Indoors/Outdoors, Open And Enclosed Nurseries Mix 4 qt (128 fl oz) to 8 qt (256 fl oz) of CEASE with 100 gallons of water. Use higher application rates under conditions of heavy disease pressure. Apply finished mixture at a rate to thoroughly soak the growing media through the root zone (1 pint / sq. ft for each 3 inches of soil depth) as a drench or directed spray using hand held, mechanical or motorized spray equipment, or as a chemigation drench or directed spray using applicable sprinkler irrigation systems. Begin applications during or after seeding, staking of cuttings or after transplanting to propagation beds, containers, pots or trays. Optimal performance is obtained with preventative treatments repeated every 21 - 28 days throughout the growing cycle. CEASE can be mixed with chemical fungicides registered for soil applications.</td>
</tr>
<tr>
<td>Annuals, Perennials, Flowering plants, Bedding plants, Container plants, Potted plants, Deciduous trees, Deciduous shrubs, Forestry Seedlings, Fruits, Vegetables and other crops grown in greenhouses and open and enclosed nurseries</td>
<td>Pythium <em>spp.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fusarium <em>spp.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phytophthora <em>spp.</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Store in a dry area inaccessible to children. Store in original containers only. Keep container closed when not in use.

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or disposal program (often such programs are run by state or local governments or by industry).

CONTAINER DISPOSAL: For 1.0-gallon, 2.5-gallon, 3-gallon, or 5-gallon plastic containers – Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

For 30-gallon plastic containers – Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

For 110-gallon or larger returnable mini-bulk containers – Return empty container for reuse. Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

CONDITIONS FOR SALE AND WARRANTY

BioWorks warrants to those persons lawfully purchasing this product that at the time of the first sale of this product by Seller that this product conformed to its description and was reasonably fit for the purposes stated on the label when used in accordance with Seller's directions. Buyers and users of this product assume the risk of any use contrary to such directions. EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, INCLUDING ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, BioWorks offers this product with the following conditions: 1) buyers and users of this product assume the risk of any storage, handling or use contrary to BioWorks’ label and directions and 2) BioWorks’ liability shall in no case exceed the purchase price of the applicable BioWorks product.

CEASE® is a registered trademark of BioWorks, Inc.
© Copyright BioWorks, Inc., 2012

Made in Mexico.

Distributed by:
BioWorks, Inc.
108 Rawson Rd, Suite 205
Victor, NY 14564
800-877-9443
www.bioworksinc.com
SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: CEASE®
Synonyms: Not Applicable
Product Use: Fungicide / Bactericide

Manufacturer: Bayer CropScience LP
Address: 1540 Drew Avenue
Davis, California 95618, USA
Telephone: 1.530.750.0150

Distributor: BioWorks, Inc.
Address: 100 Rawson Road, Suite 205
Victor, New York 14564, USA
Telephone: 1.800.877.9443

Emergency Phone: In USA call CHEMTREC 24-hour toll-free hotline at 1.800.424.9300
Outside USA, call 1.703.527.3887 (collect calls accepted)

2. HAZARDS IDENTIFICATION

Emergency Overview: This preparation is not considered to be hazardous to humans or the environment. Product has very low toxicity via ingestion, skin contact, or inhalation.

Possible Routes of Entry: Inhalation, eyes, and skin

Potential Health Effects from Over-exposure:
Skin/Eye Irritation: Direct contact with skin or eyes may cause mild irritation in some individuals.
Inhalation: Inhalation of spray mist may cause respiratory tract irritation in some individuals.

Section 2 Notes: In the unlikely event that over-exposure occurs, follow first aid measures in section 4.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients: CAS No. Percent
Bacillus subtilis strain QST 713 Not Applicable 1.34% (Nominal)
Mixture of inert, non-reactive ingredients Not Applicable to mixtures 98.66%

Section 3 Notes: This preparation contains no hazardous substances per Directive 67/548/EEC.

4. FIRST-AID MEASURES

General: Remove from source of exposure. If irritation or other signs of toxicity occur, seek medical attention.
Eyes: Hold eye open and rinse slowly and gently with plenty of water for at least 15 minutes. If present, remove contact lenses and continue rinsing eye.

Skin: Remove contaminated clothing. Thoroughly wash skin with plenty of soap and water.

Inhalation: Move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration.

Ingestion: Call a doctor immediately if a large amount is swallowed. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.

Note to Physicians and First Aid Providers: This product has low oral, dermal, and inhalation toxicity. Direct contact with eyes may cause temporary irritation. Provide symptomatic and supportive care as necessary.

5. FIRE-FIGHTING MEASURES

General: Use methods and protective gear that are appropriate for the conditions and size of the fire.

Extinguishing Media: Use appropriate media for underlying cause and combustibles involved in the fire.

Special Equipment: Self-contained breathing apparatus and full protective gear according to the conditions and size of the fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear suitable protective clothing such as long-sleeved shirt, pants, waterproof gloves and shoes with socks.

Methods for Clean Up: Carefully mop or sweep up spill and place in a closed container for disposal. Rinse area with water.

Section 6 Notes: Refer to section 8 for personal protection and section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling: Use handling procedures that minimize exposure to the product.

Storage: Store in a cool, dry, well-ventilated place in original container. Keep container closed when not in use. Do not contaminate other pesticides, fertilizers, water, or feed by storage or disposal.

Section 7 Notes: Avoid contact with skin, eyes and clothing. Avoid inhalation of spray mist. Wash any contamination from skin or eyes immediately. Wash hands and exposed skin before eating, drinking, smoking or using the toilet.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General: Protective clothing should be selected according to the conditions likely to be encountered in the workplace. Ensure good ventilation. No exposure limits have been established.

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to reduce airborne exposure at locations/operations where spray mist may be generated.

Personal Protective Equipment:

Respiratory: Not normally required. However, if needed, use a dust/mist filtering face mask or respirator.

Eyes and Face: Chemical safety goggles or safety glasses with side shields.

Hands/Skin: Gloves made from chemically resistant material such as neoprene, vinyl, rubber, or nitrile.

Other Clothing: Wear suitable protective clothing such as long-sleeved shirt, pants, and shoes with socks.

Hygienic Practices: Wash hands and exposed skin before eating, drinking, smoking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light to medium brown aqueous dispersion
Odor: Sweet, earthy odor
Melting Point: Approximately 0° C (32° F)
Boiling Point: ≥ 100° C (≥ 212° F)
Density: 1.0 – 1.3 g/cm³
Solubility in Water: Dispersible in water
pH as Supplied: 4.8 – 6.0

10. STABILITY AND REACTIVITY

Stability: Stable, material is non-reactive.
Conditions to Avoid: None that are known.
Materials to Avoid: None that are known.
Hazardous Decomposition Products: None that are known.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Possible Routes of Entry: Inhalation, eyes, and skin

Potential Health Effects from Over-exposure
Skin/ Eye Irritation: Direct contact with skin or eyes may cause slight to mild irritation in some individuals.

Inhalation: Inhalation of spray mist may cause respiratory tract irritation in some individuals.

Acute studies on a similar formulation:

- **Acute Oral LD50 (Rat):** > 5,000 mg/kg
- **Eye Irritation (Rabbit):** Nonirritant
- **Acute Dermal LD50 (Rabbit):** > 5,000 mg/kg
- **Dermal Irritation (Rabbit):** Nonirritant
- **Acute Inhalation LD50 (Rat):** > 1.4 mg/L (Limit test)*

Section 11 Notes: None of the components of this product are listed as carcinogenic by NTP, IARC, or OSHA.

* No deaths or toxic effects were observed in the test animals during the study period.

**12. ECOLOGICAL INFORMATION**

Ecological Information: With regard to environmental fate and behavior this product is not expected to impose any environmental risk.

Ecotoxicity Information: It can be concluded from test results with the technical active ingredient in aquatic vertebrates and invertebrates, and in various terrestrial vertebrates and invertebrates that this product is non-toxic to the species tested is not expected to impose any environmental risk.

**13. DISPOSAL CONSIDERATIONS**

PESTICIDE DISPOSAL: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or disposal program (often such programs are run by state or local governments or by industry).

CONTAINER DISPOSAL: For 1.0-gallon, 2.5-gallon, 3-gallon, or 5-gallon plastic containers – Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

**14. TRANSPORT INFORMATION**

Land: ADR / RID Class: Not controlled under ADR (Europe)

Water: IMDG Class: Not controlled under IMDG

Air: IATA – DGR Class: Not controlled under IATA
15. REGULATORY INFORMATION

UNITED STATES: Registered as a pesticide product. (EPA Reg. No. 264-1155-68539)

This pesticide product is registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other information, including direction for use.

CAUTION
Direct contact with skin or eyes may cause mild irritation.
Inhalation of spray mist may cause respiratory tract irritation.

Labeling According to EC Directives:
Symbol: Not Required
R-phrases: Not Required
S-phrases: (Recommended) S 2 Keep out of reach of children
S 20/21 When using do not eat, drink or smoke
S 24/25 Avoid contact with skin and eyes
S 29/35 Do not empty into drains; dispose of this material and its container in a safe way

U.S. EPA SARA: No acute or chronic health hazards. No fire, release of pressure, or reactivity hazards. (Title III Classification)

CANADA: Registered as a pesticide product. (PCP No. 30522)

16. OTHER INFORMATION

CONTACT: BioWorks, Inc.
100 Rawson Rd, Suite 205
Victor, NY 14564
TELEPHONE: 800-877-9443

DISCLAIMER AND LIMITATION OF LIABILITY

Disclaimer: This document set forth is based on information that BioWorks, Inc. believes to be accurate. No warranty, expressed or implied, is intended. The information is provided solely for your information and consideration and BioWorks, Inc. assumes no legal responsibility for use or reliance thereon.
OMRI Listed®

The following product is OMRI Listed. It may be used in certified organic production or food processing and handling according to the USDA National Organic Program rule.

Product
CEASE®

Company
BioWorks, Inc.
Mr. William J. Foster
100 Rawson Road, Suite 205
Victor, NY 14564

Status
Allowed with Restrictions

Category
NOP: Microbial Products

Issue date
16-Jun-2008

Product number
bwk-1268

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Jun-2017

Restrictions
May be used as a pest lure, repellent, or as part of a trap, or as a disease control. May only be used for other pesticidal purposes if the requirements of 205.206 [e] are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.

Executive Director

OMRI Listed
For Organic Use

Organic Materials Review Institute
P.O. Box 11558, Eugene, OR 97440-3758, USA
541.343.7600 • fax 541.343.8971 • info@omri.org • www.omri.org

OMRI.OPD.2.6.7.2

Allowed with Restrictions

NOP: Microbial Products

16-Jun-2008

bwk-1268

Crop Pest, Weed, and Disease Control

01-Jun-2017

OMRI Listed
The following product is OMRI Listed. It may be used in certified organic production or food processing and handling according to the USDA National Organic Program rule.

Product
CEASE®

Company
BioWorks, Inc.
Mr. William J. Foster
100 Rawson Road, Suite 205
Victor, NY 14564

Status
Category
Allowed with Restrictions
NOP: Microbial Products

Issue date
16-Jun-2008

Product number
bwk-1268

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Jun-2017

Restrictions
May be used as a pest lure, repellent, or as part of a trap, or as a disease control. May only be used for other pesticidal purposes if the requirements of 205.206 [e] are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.

OMRI Listed
For Organic Use

Organic Materials Review Institute
P.O. Box 11558, Eugene, OR 97440-3758, USA
541.343.7600 • fax 541.343.8971 • info@omri.org • www.omri.org

OMRI.OPD.2.6.7.2
DoubleNickel™ LC

Aqueous Suspension Biofungicide/Bactericide

FOR ORGANIC PRODUCTION

ACTIVE INGREDIENT:
Bacillus amylovorans strain D747*.................................................................98.85%
OTHER INGREDIENTS: ..............................................................................1.15%
TOTAL ........................................................................................................100.00%

*Contains a minimum of 1 x 10⁸ colony-forming units (cfu) per milliliter

KEEP OUT OF REACH OF CHILDREN
CAUTION

See Inside Panels for Additional Precautionary Statements

GENERAL INFORMATION
DoubleNickel™ LC is a broad-spectrum preventative biofungicide/bactericide for control or suppression of fungal and bacterial plant diseases. The active ingredient of DoubleNickel™ LC is a naturally occurring strain (D747) of the beneficial bacterium Bacillus amylovorans. DoubleNickel™ LC also colonizes plant root hairs, preventing establishment of disease-causing fungi and bacteria.

DoubleNickel™ LC can be applied alone or in combination and/or rotation with chemical fungicides as a tool for integrated disease management in agricultural crops, ornamental and nursery plants, and turfgrass. DoubleNickel™ LC offers a valuable tool for management of resistance to chemical fungicides through its multiple and unique modes of action.

DoubleNickel™ LC can be applied up to and including the day of harvest.

DIRECTIONS FOR USE
It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water in: coveralls, waterproof gloves, shoes plus socks.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

MIXING AND HANDLING INSTRUCTIONS
Mix the required amount of DoubleNickel™ LC in water with sufficient agitation to maintain a uniform suspension in the spray or mixing tank. Tank should be cleaned prior to use. Do not use highly alkaline or highly acidic water to mix sprays. Use a buffering agent if necessary to maintain neutrality pH 6 to 8 of water in the tank. Maintain agitation during application. Apply immediately after mixing; do not allow spray mix to stand overnight.

DoubleNickel™ LC can be mixed and used with other agricultural chemicals for which such mixing is permitted by the product labels, in accordance with the most
restrictive of those label limitations and precautions. If such a mixture is planned, a compatibility “jar test” should first be conducted by mixing the correct proportions ofDouble Nickel™ LC and these products in a small volume of water.

APPLICATION METHODS

**Ground:** Double Nickel™ LC can be applied in most commonly-used ground application equipment, such as (but not limited to): tractor-mounted boom, airblast, high clearance, hose-end, backpack, and other pressurized sprayers; foggers or mist blowers; water wheel and other drench applicators; and shank or other soil injection method.

**Aerial:** Double Nickel™ LC can be applied by fixed or rotary winged aircraft in a minimum of 3 gallons of water per acre. Standard precautions should be taken to minimize spray drift.

**Chemigation:** Double Nickel™ LC can be applied through drip (trickle) and sprinkler type irrigation equipment. Refer to the section entitled “Chemigation Instructions” for detailed instructions.

### Agricultural Crops

<table>
<thead>
<tr>
<th>CROPS</th>
<th>DISEASES/PATHOGENS (See footnotes for additional information)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vegetables and melons</strong></td>
<td></td>
</tr>
<tr>
<td>Brassica vegetables such as broccoli, cabbage, cauliflower, Brussel sprouts, kohlrabi, and other cole crops (including those grown for seed production).</td>
<td>Pin rot complex (Alternaria/Xanthomonas)*&lt;br&gt; Leaf spots (Alternaria spp., Xanthomonas spp.)&lt;br&gt; Downy mildew (Peronospora spp.)&lt;br&gt; Powdery mildew (Erysiphe polygoni)&lt;br&gt; “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, Phytophthora, or Verticillium” spp. (see instructions below for “Soil application”).</td>
</tr>
<tr>
<td>Bulb vegetables such as onions, garlic, shallots, and others (including those grown for seed production).</td>
<td>Botrytis spp. (neck rot, leaf blight)&lt;br&gt; Purple blotch (Alternaria spp.)&lt;br&gt; Downy mildew (Peronospora spp.)&lt;br&gt; Powdery mildew (Erysiphe spp.)&lt;br&gt; Rust (Puccinia porri)&lt;br&gt; “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, Phytophthora, or Verticillium” spp. (see instructions below for “Soil application”).</td>
</tr>
<tr>
<td>Cucurbits such as cucumbers, squash (all types), cantaloupes, muskmelons, watermelons, and other melons (including those grown for seed production).</td>
<td>Powdery mildew (Erysiphe and Sphaerotheca spp.)&lt;br&gt; Downy mildew (Pseudoperonospora sp.)&lt;br&gt; Gummy stem blight (Didymella bryoniae and Poma cucurbitacearum)&lt;br&gt; See instructions below for “Soil application” against the following diseases:&lt;br&gt; Vine decline (Monosporosporon cannonballus)<strong>&lt;br&gt; Charcoal rot (Macrophomina phaseoli)</strong>&lt;br&gt; “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, Phytophthora, or Verticillium” spp. (see instructions below for “Soil application”).</td>
</tr>
<tr>
<td>Fruiting vegetables such as tomatoes, peppers, eggplant, tomatillo, okra, and others (including those grown for seed production).</td>
<td>Bacterial spot (Xanthomonas spp.)<em>&lt;br&gt; Bacterial speck (Pseudomonas syringae pv. syringae)**&lt;br&gt; Gray mold (Botrytis cinerea)&lt;br&gt; Powdery mildew (Leveillula, Oidiodyces, Erysiphe, and Sphaerotheca spp.)&lt;br&gt; Early blight (Alternaria solani)</em>&lt;br&gt; Late blight (Phytophthora infestans)<em>&lt;br&gt; See instructions below for “Soil application” against the following diseases:&lt;br&gt; Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, Phytophthora, or Verticillium” spp.&lt;br&gt; Southern blight (Sclerotium rolfsii)</em> and **</td>
</tr>
<tr>
<td>Leafy vegetables such as head and leaf lettuce, celery, spinach, radish, arugula, watercress, and others (including leafy Brassica vegetables such as mustard and collard greens, kale, bok choi, and related crops), including those grown for seed production.</td>
<td>Downy mildew (Bremia lactucae, Peronospora sp.)<em>&lt;br&gt; Powdery mildew (Golovinomyces (Erysiphe) cichoracearum)</em>&lt;br&gt; Bacterial blights&lt;br&gt; Head and leaf drop (Sclerotinia spp.)<em>&lt;br&gt; Pink rot (Sclerotinia sclerotiorum)</em>&lt;br&gt; Leaf spots (Cercospora sp.)&lt;br&gt; See instructions below for “Soil application” against the following diseases:&lt;br&gt; Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, Phytophthora, or Verticillium” spp.&lt;br&gt; Bottom rot (Rhizoctonia solani)</td>
</tr>
</tbody>
</table>

### CROPS

<table>
<thead>
<tr>
<th>CROPS</th>
<th>DISEASES/PATHOGENS (See footnotes for additional information)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vegetables and melons</strong></td>
<td></td>
</tr>
<tr>
<td>Legume vegetables succulent and dried broadleaf and peas such as green, snap, shell, and Lima beans, garbanzo beans, chickpeas, soybeans, dry beans, peas, split peas, lentils, and other legumes, including those grown for seed production.</td>
<td>White mold (Sclerotinia sclerotiorum)**&lt;br&gt; Gray mold (Botrytis cinerea)<em>&lt;br&gt; Powdery mildew (Erysiphe spp.)&lt;br&gt; Rusts</em>, including Uromyces appendiculatus, Puccinia spp., and Asian soybean rust (Phytophthora pachyrhizi)&lt;br&gt; “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, Phytophthora, or Verticillium” spp. (see instructions below for “Soil application”).</td>
</tr>
<tr>
<td>Root, tuber, and corn vegetables such as potato, sweet potato, carrot, cassava, beets, ginger, radish, horseradish, such as broccoli, cabbage, cauliflower, Brussel sprouts, kohlrabi, and other root, tuber and corn crops (including those grown for seed production).</td>
<td>Black root/crown rot (Alternaria spp.)&lt;br&gt; Bacterial leaf blight (Xanthomonas campestris)&lt;br&gt; Downy mildew (Peronospora spp.)&lt;br&gt; Powdery mildew (Erysiphe spp.)&lt;br&gt; Gray mold (Botrytis spp.)&lt;br&gt; White mold (Sclerotinia sclerotiorum)<strong>&lt;br&gt; Scab (Elsinoe fawcetti)</strong>&lt;br&gt; Early blight (Alternaria solani)*&lt;br&gt; Late blight (Phytophthora infestans)**&lt;br&gt; See instructions below for “Soil application” against the following diseases:&lt;br&gt; Black scurf (Rhizoctonia solani)&lt;br&gt; Cavity spot (Phytophthora spp.)&lt;br&gt; “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, Phytophthora, or Verticillium” spp.</td>
</tr>
<tr>
<td>Other vegetables such as sweet corn, popcorn, asparagus, peanut, and watercress</td>
<td>Botrytis spp. (Erysiphe spp.)&lt;br&gt; Powdery mildew (Erysiphe spp.)&lt;br&gt; Rusts (Puccinia spp.)&lt;br&gt; White mold (Sclerotinia sclerotiorum)**&lt;br&gt; Leaf spots (Cercospora and Cercosporidium spp.)&lt;br&gt; “Damping off,” seedling blights, and root or crown diseases caused by Pythium, Rhizoctonia, Fusarium, Phytophthora, or Verticillium” spp. (see instructions below for “Soil application”).</td>
</tr>
<tr>
<td>Tree fruits and nuts</td>
<td>Alternaria leaf spot (Alternaria alternata)<em>&lt;br&gt; Postbloom fruit drop (Colletotrichum acutatum)</em>&lt;br&gt; Greasy spot (Mycosphaerella citri)**&lt;br&gt; Citrus canker (Xanthomonas campestris pv. citri)<em>&lt;br&gt; Melanose (Diporthea citri)</em>&lt;br&gt; Pome fruits such as apple, pear, crabapple, quince, and others</td>
</tr>
<tr>
<td>Stone fruits such as apricot, cherry, nectarine, peach, plum, prune, pluot, and others</td>
<td>Powdery mildew (Sphaerotheca and Podosphaera sp.)<em>&lt;br&gt; Bacterial canker (Pseudomonas spp.)&lt;br&gt; Brown rot blossom blight (Monilinia laxa)</em>&lt;br&gt; Brown rot (Monilinia fructicola)<strong>&lt;br&gt; Gray mold (Botrytis cinerea)*&lt;br&gt; Peach leaf curl (Taphrina deformans)</strong>&lt;br&gt; Bacterial leaf spot (Xanthomonas arboica pv. pruni)**&lt;br&gt; Rusty spot (Podosphaera leucotricha)*</td>
</tr>
<tr>
<td>Tree nuts such as almond, pistachio, pecan, walnut, filbert, hazelnut, chestnut, macadamia, and other tree nuts</td>
<td>Walnut blight (Xanthomonas campestris)<em>&lt;br&gt; Anthracnose (Colletotrichum acutatum)&lt;br&gt; Bacterial canker (Pseudomonas syringae)</em>&lt;br&gt; Shot hole (Wilsonomyces carpophilus)<em>&lt;br&gt; Brown rot (Monilinia spp.)</em>&lt;br&gt; Pecan scab (Cladosporium pycadenium)* and **</td>
</tr>
<tr>
<td>Pomegranates</td>
<td>Leaf and fruit spots (Cercospora, Gloeosporium and Pestalotia sp.)<em>&lt;br&gt; Fruit rots (Alternaria, Botrytis, and other spp.)</em>&lt;br&gt; Powdery mildew (Sphaerotheca parvissima)</td>
</tr>
</tbody>
</table>
CROPS DISEASES/PATHOGENS
[See footnotes for additional information]

Other fruits

**Strawberry**
- Powdery mildew (Sphaerotheca macularis, Erysiphe spp.)
- Gray mold (Botrytis cinerea)
- Anthracnose (Colletotrichum acutatum)
- Angular leaf spot (Xanthomonas fragariae)
- For the following diseases, see instructions below for “Soil application” (and also root dip instructions):
  - “Damping off” and root or crown diseases caused by Rhizoctonia, Fusarium, Pythium, Phytophthora, and/or Verticillium spp.
  - Charcoal rot (Macrophomina phaseolina)

**Berries**, including blueberry, blackberry, raspberry, loganberry, huckleberry, kiwi/fruit, gooseberry, elderberry, cranberry (non-flooded fields), currant, and other berries
- Mummy berry (Monilinia vaccinii-corymbosi)
- Bacterial canker (Pseudomonas spp.)
- Anthracnose fruit rot (Colletotrichum acutatum)
- Sclerotinia (Sclerotinia sclerotiorum)

**Grapes**, including wine grapes, table grapes, and raisins
- Powdery mildew (Erysiphe (formerly Uncinula) necator)
- Gray mold (Botrytis cinerea)
- Sour rot complex
- Downy mildew (Plasmopara viticola)
- Phomopsia (Phomopsis viticola)
- Eutypa (Eutypa lata)

**Tropical fruits**
- Anthracnose (Colletotrichum spp.)
- Scab (Sphaceloma persea)
- Bacterial canker (Xanthomonas campestris)
- Sigatoka (Mycosphaerella fijiensis)

**Herbs and spices**
- Powdery mildews (Oidium spp. and others)
- Downy mildews (Peronospora spp. and others)
- Damping off diseases (Rhizoctonia, Pythium, Alternaria, and Fusarium spp.)
- Leaf spots (Alternaria, Septoria, Colletotrichum, and Cercospora spp.)
- Bacterial diseases (Erwinia, Xanthomonas, and Pseudomonas spp.)
- Rusts (Puccinia spp. and others)
- “Damping off” and root or crown diseases caused by Rhizoctonia, Fusarium, Pythium, Phytophthora, and/or Verticillium spp. (see instructions below for “Soil application”)

**Coffee**
- Coffee berry disease (Colletotrichum coffeae)
- Coffee rust (Hemileia vastatrix)
- Anthracnose (Colletotrichum spp.)
- Botrytis blight
- Cercospora leaf spot** and berry blight**
- “Damping off” and root or crown diseases caused by Rhizoctonia, Fusarium, Pythium, Phytophthora, and/or Verticillium spp. (see instructions below for “Soil application”)

**Tobacco**
- Angular leaf spot (Pseudomonas spp.)
- Anthracnose (Colletotrichum and Glomerella spp.)
- Blue mold or downy mildew (Peronospora spp.)
- Brown spot (Alternaria)
- Barn spot/ frogeye leaf spot (Cercospora nicotianae)
- Collar rot (Sclerotinia sclerotiorum)
- Gray mold (Botrytis cinerea)
- Powdery mildew (Erysiphe cichoracearum)
- Target spot (Rhizoctonia solani)
- See instructions below for “Soil application” against the following diseases:
  - “Damping off”, seedling blights, and root or crown diseases caused by Pythium, Rhizocotonia, Fusarium, Oidium, Phytophthora, or Verticillium spp.
  - Charcoal rot (Macrophomina phaseolina)
  - Black root rot (Thielaviopsis basicola)
  - Black shank (Phytophthora spp.)
  - Southern blight/southern stem rot (Sclerotium rolfsii)

Other Crops

**Herbs and spices**
- Powdery mildews
- Downy mildews
- Damping off diseases
- Leaf spots
- Bacterial diseases
- Rusts
- “Damping off” and root or crown diseases caused by Rhizoctonia, Fusarium, Pythium, Phytophthora, and/or Verticillium spp. (see instructions below for “Soil application”)

**CROPS DISEASES/PATHOGENS**
[See footnotes for additional information]

**Other Crops (continued)**

**Corn**, including field corn, sweet corn, popcorn, silage corn, seed corn, and other corn crops.
- Common rust (Puccinia sorghi)*
- Southern leaf blight (Bipolaris maydis/Claytonia)
- downy mildew (Clavibacter michiganensis/ Helminthosporium maydis)

**Cereals**, such as barley, millet, oats, rice, rye, sorghum, triticale, wheat, and other cereal grain crops (including those grown for seed).
- Powdery mildew (Erysiphe graminis)
- Rust (Puccinia spp.)*
- Rice blast (Pyricularia oryzae)
- Sheath spot/blight (Rhizoctonia and Thanatephorus spp.)
- Stem (Tilletia controversa)
- Bacterial blight/streak (Xanthomonas spp.)
- Stem rot (Magnaporthe and Sclerotium spp.)
- Cercospora leaf spot
- Brown rot/leaf spots/smut (Ceratotheca, Cochliobolus, Dreschlera, and Entyloma spp.)
- Black stem/crown rot (Sclerotium
dr.).

**Melons**, including cantaloupe, honeydew, muskmelon, watermelon, and others.
- Powdery mildew
- Rust (Puccinia melonis)
- Cercospora leaf spot
- Brown rot/leaf spots/smut (Ceratotheca, Cochliobolus, Dreschlera, and Entyloma spp.)

**Peppers**
- Powdery mildew
- Rust (Puccinia capsici)
- Brown rot/leaf spots/smut (Ceratotheca, Cochliobolus, Dreschlera, and Entyloma spp.)

**Sugar beets**, including sugar beet, sugar beet root, sugar beet leaf blight, and other leaf blights.
- Rusts
- Bacterial Speck (Pseudomonas syringae pv.glycinea)
- Bacterial Pustule (Xanthomonas spp.)
- Brown Spot (Septoria glycinae)
- Cercospora Leaf Spot
- Pod and Stem Blights (Diaporthe and Physomopsis spp.)
- Downy Mildew (Peronospora parasitica)

**Mint**
- Rust (Puccinia spp.)

**Hops**
- Powdery mildew (Sphaerotheca macularis)*

**Sugar beets** (including crops grown for seed production)
- Leaf spots (Cercospora and Ramularia spp.)
- Powdery mildew (Erysiphe spp.)
- Rust (Uromyces betae)

**Footnotes:**
* Suppression only; for improved control mix or rotate with chemical fungicide approved for such use. ** NOT FOR USE IN CALIFORNIA
1 Tank mix or rotate with copper-based fungicides at label rates for improved control.
2 Apply at or immediately following planting (but before plant emergence) as a banded seedling treatment 4 to 6 inches wide. Make second application at thinning or cultivation in sufficient water and multiple nozzles to ensure thorough coverage of lower leaves and surrounding soil surface. Incorporation with light irrigation after application may improve disease control. Repeat at 10-14 day intervals if conditions promoting disease persist.
3 For greasy spot suppression, apply at first new foliar flush and repeat with each new flush.
4 Tank mix with spray oil or copper based fungicide at labeled rates.
5 For suppression of citrus scab, start applications at first new foliage flush and repeat at each new flush.
6 Begin applications before bloom when environmental conditions favor disease development, repeating at 7 to 14 day intervals or as needed. Control may be enhanced by addition of a surfactant to improve spray coverage. Use only surfactants known to be safe for use on the crop and for which such use is allowed.
7 Rotate with antibiotics registered for fire blight control for improved performance. Begin applications at 1-5% open blossoms and repeat every 3-7 days as necessary until petal fall, when intervals can be increased to 7 days. Double Nickel™ LC can also be used in summer "cover spray" applications to control the shoot blight phase of fire blight and summer diseases. Can be mixed with copper fungicides to improve control.
8 Make first application at popcorn stage and repeat every 7 days.
9 Start applying at early bloom stage and repeat every 7-10 days through petal fall.
10 Pre-harvest applications in sufficient water to cover fruit or other harvested plant parts may improve control of postharvest infections.
11 Begin applications at or before pettislate bloom, repeating every 7-10 days. Apply before rainfall if possible, and tank mix or rotate with a copper-based bactericide registered for such use for improved control.
12 Start applications at or just before flowering and repeat every 7-10 days as needed through harvest.
13 Apply before fall rains and again during dormancy before spring growth.
14 Start applications when new shoots are ½ to 1½ inches long. Repeat at 3-5 inches, 8-10 inches, and then at 7-10 day intervals until disease conditions no longer exist.
15 Apply at bloom, before bunch closure, at veraison, and before harvest.
16 Apply when shoots are ½ to 1 inch long and again when 6-8 inches long.
17 Mix 2 fluid ounces Double Nickel™ LC per gallon of water and apply to pruning wounds.
18 Tank mix or rotate with copper-based fungicides at label rates for improved control.
19 Mix 2 fluid ounces Double Nickel™ LC per 100 gallons of water and apply in minimum of 20 gallons per acre from emergence to training. 50 gallons per acre from training to wire, and 150 gallons per acre from wire touch through harvest.
20 For treatment of horseradish or strawberry roots immediately before transplanting: im- mense bare roots (individually or in bunches) for 10 seconds in a suspension of 1 to 2 parts Double Nickel™ LC per gallon of water.
Foliar application: For control of diseases on foliage, flowers, fruit, or other above-ground portions of plants. Mix Double Nickel™ LC in water and apply as a spray at a rate of 0.5 to 6 quarts of Double Nickel™ LC per acre in sufficient water to achieve thorough coverage of the crop canopy with minimal runoff. Begin applications at crop emergence, transplanting, or when conditions are conducive to development of disease. Repeat application every 3 to 10 days, as needed, for as long as conditions favor disease development. Lower rates (0.5 to 4 quarts per acre) may be applied under light disease pressure, to smaller (e.g., newly-emerged) plants, or when Double Nickel™ LC is used in a tank mix with other fungicides whose labels allow such use. Under moderate to severe disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (4-5 quarts/acre), apply more frequently (every 7-9 days), and mix or rotate Double Nickel™ LC with other fungicides for improved performance.

Soil application: For control of soilborne diseases infecting seeds, seedlings, roots, crown, stems, or other plant parts below ground or in contact with soil. Apply Double Nickel™ LC at 0.5 to 4.5 pints per acre. Mix the required amount in sufficient water to achieve thorough coverage of the crop canopy with minimal runoff. Begin applications at crop emergence, transplanting, or when conditions are conducive to development of disease. Repeat application every 3 to 10 days, as needed, for as long as conditions favor disease development. Lower rates (0.5 to 4 quarts per acre) may be applied under light disease pressure, to smaller (e.g., newly-emerged) plants, or when Double Nickel™ LC is used in a tank mix with other fungicides whose labels allow such use. Under moderate to severe disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (2-4.5 quarts per acre), apply more frequently (every 2-4 weeks), and mix or rotate Double Nickel™ LC with other fungicides for improved performance.

Soil drench: Apply Double Nickel™ LC to the rooting zone. Injection directly into the rooting zone using shanks or similar equipment. Apply Double Nickel™ LC to the root zone. Injection directly into the rooting zone using shanks or similar equipment. Lower rates (0.5 to 2 pints of Double Nickel™ LC per acre) may be applied under light disease pressure, to smaller plants, or when Double Nickel™ LC is used in a tank mix with other fungicides whose labels allow such use. Under moderate to severe disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (2-4.5 quarts per acre), apply more frequently (every 2 weeks), and mix or rotate Double Nickel™ LC with other fungicides for improved performance.

Drip application: Apply Double Nickel™ LC to the root zone. Injection directly into the rooting zone using shanks or similar equipment. Lower rates (0.5 to 2 pints of Double Nickel™ LC per acre) may be applied under light disease pressure, to smaller plants, or when Double Nickel™ LC is used in a tank mix with other fungicides whose labels allow such use. Under moderate to severe disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (2-4.5 quarts per acre), apply more frequently (every 2 weeks), and mix or rotate Double Nickel™ LC with other fungicides for improved performance.

### Rates for banded (in-furrow) application

Find desired application rate of Double Nickel™ LC per acre in the left column. Read across that line to the correct row spacing indicated.

<table>
<thead>
<tr>
<th>Double Nickel™ LC rate (per acre)</th>
<th>Space between rows (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>12, 14, 16, 18, 20, 22</td>
</tr>
<tr>
<td>0.75</td>
<td>24</td>
</tr>
<tr>
<td>1.0</td>
<td>28</td>
</tr>
<tr>
<td>1.25</td>
<td>32</td>
</tr>
<tr>
<td>1.5</td>
<td>36</td>
</tr>
<tr>
<td>1.75</td>
<td>40</td>
</tr>
<tr>
<td>2.0</td>
<td>45</td>
</tr>
<tr>
<td>2.5</td>
<td>50</td>
</tr>
<tr>
<td>3.0</td>
<td>55</td>
</tr>
<tr>
<td>3.25</td>
<td>60</td>
</tr>
<tr>
<td>3.5</td>
<td>65</td>
</tr>
<tr>
<td>3.75</td>
<td>70</td>
</tr>
<tr>
<td>4.0</td>
<td>75</td>
</tr>
<tr>
<td>4.25</td>
<td>80</td>
</tr>
<tr>
<td>4.5</td>
<td>85</td>
</tr>
</tbody>
</table>

### Nurseries, greenhouses, shadehouses, and ornamental plants

**Spray application:** Mix 0.5 to 6 quarts of Double Nickel™ LC per 100 gallons of water and apply as a foliar spray of sufficient volume to wet the entire plant with minimal runoff. Begin preventative applications at plant emergence and repeat every 3-28 days as needed (every 3-7 days if disease pressure is high or environmental conditions are highly favorable to disease outbreak, 10-28 days under low pressure or less conducive conditions).

**Drench application:** Mix 0.5 to 4.5 pints of Double Nickel™ LC per 100 gallons of water and apply as a drench or coarse spray to soil or other growing media in pots, flats, plugs, trays, or planting beds, for control or suppression of soilborne diseases of seedlings, cuttings, bedding plants, and transplants (including vegetables and other transplanted food crops). Make first application at or immediately before seeding, sticking, germination, or transplanting. Repeat applications every 14-28 days as needed. Transplants can be treated immediately before transplanting into field soils to protect against damping-off and other diseases that reduce plant establishment.

**Cutting or root dip:** Dip basal end of cuttings or bare roots (individually or in bunches) in a suspension of 1 to 2 pints of Double Nickel™ LC per gallon of water. Immerse for 5-10 seconds immediately before planting.

**Chemigation:** Mix 0.5 to 4.5 pints of Double Nickel™ LC per 100 gallons of water and apply via drip, hand-held, or sprinkler irrigation systems. Refer to "Chemigation Instructions" for more details.

### CROPS/USE SITES

- **Indoor, outdoor, and shade- or other cover-grown ornamental trees and shrubs,** flowering plants, foliage plants, tropical plants, potted plants, potted or cut flowers, bedding plants, forestry seedlings, conifer production for reforestation, fruit trees, vegetables, and other crops grown in greenhouses or nurseries.
- **Powdery mildews caused by Erysiphe, Podosphaera, Sphaerotheca, Oidiurn, and Golovino- myces spp.**
- **Anthracnose (Colletotrichum spp.)**
- **Bacterial leaf spots caused by Erwinia, Pseudomonas, and Xanthomonas spp.**
- **Damping-off disease (Rhizoctonia, Pythium, Fusarium spp.)**
- **Late blight, blackeye, and root rot caused by Phytophthora spp.**
- **Gray mold and blight caused by Botrytis cinerea Black root rot (Aspergillus spp.) Black spot of roses (Diplloporon rosae) Downy mildew (Peronospora spp.) Leaf spots caused by Alternaria, Septoria, Cerco- spora, Entomosporium, Helminthosporium, and Myrothecium spp.) Rust (Puccinia spp.) Scab (Venturia spp.) Root rot, bottom rot, or stem rot caused by Rhizoctonia solani Sclerotinia black Fusarium wilt**
Turfgrass application

For control of foliar diseases, apply Double Nickel™ LC at 1 to 4 fluid ounces per 1,000 square feet as a ground-directed spray in sufficient water to provide thorough coverage. To control root and crown diseases in or on the soil, immediately follow the spray with sufficient overhead sprinkler irrigation to move the product into the root zone.

CROPS/USE SITES

<table>
<thead>
<tr>
<th>DISEASES/PATHOGENS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthracnose (Colletotrichum graminicola)</td>
</tr>
<tr>
<td>Brown spot (Rhizoctonia solani)</td>
</tr>
<tr>
<td>Dollar spot (Lanzia and Meloerodiscus spp., formerly Sclerotinia homeocarpa)</td>
</tr>
<tr>
<td>Powdery mildew (Erysiphe graminis)</td>
</tr>
<tr>
<td>Rust (Puccinia graminis)</td>
</tr>
<tr>
<td>Gray leaf spot (Pyricularia grisea)</td>
</tr>
</tbody>
</table>

**Non-agricultural Use Requirements**

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

**Storage and Disposal**

Do not contaminate water, food, or feed by storage and disposal. Pesticide Storage: Store in a dry area inaccessible to children. Store in original containers only. Keep container closed when not in use.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of onsite or at an approved waste disposal facility. Container Handling: Nonrefillable container. Do not reuse or refill this container.

- For containers equal to or less than 5 gallons -
  1. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

- For containers greater than 5 gallons -
  1. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Chemigation Instructions**

**General Information:**

Apply this product only through drip (trickle) irrigation (including micro-irrigation through spaghetti tubes or individual tubes) or sprinkler irrigation (including impact or microsprinklers, microjet, overhead boom, water gun, solid set, lateral move, end tow, side-roll, center pivot, or hand move, including mist-type systems); or with hand-held calibrated irrigation equipment (such as a hand-held wand with injector). Do not apply this product through any other type of irrigation system. Crop injury or lack of effectiveness can result from non-uniform distribution of treated water.

If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 50 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and injector system, and flush with clean water before use. Failure to provide a clean tank, free of scale or residues may reduce effectiveness of this product.

**Drip (trickle) and micro-irrigation chemigation**

1. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

6. Systems must use a metering pump such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agricultural chemicals. agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the selected area, and at such a rate that the wet area is not under considerable runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.

**Sprinkler chemigation**

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

6. Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer or other appropriate tank-mixed agricultural chemicals. agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the selected area, and at such a rate that the wet area is not under considerable runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.

8. Do not apply when wind speed favors drift beyond the area intended for treatment.
WARRANTY
Certis USA, L.L.C. warrants that the material contained herein conforms to the
description on the label and is reasonably fit for the purpose referred to in the
directions for use. Timing and method of application, weather, watering prac-
tices, nature of soil, the disease problem, condition of the crop, incompatibility
with other influencing factors in the use of this product are beyond the control
of the seller. To the extent consistent with applicable law, buyer assumes all
risks of use, storage, or handling of this material not in strict accordance with
directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF
THE FITNESS OR MERCHANTABILITY IS MADE.
DoubleNickel 55 WDG

MATERIAL SAFETY DATA SHEET

Certis U.S.A., LLC
9145 Guilford Road, Suite 175
Columbia, Maryland 21046

EMERGENCY TELEPHONE NUMBER
CHEM•TEL (800) 255-3924
Outside North America Call Collect (813) 248-0585

PRODUCT INFORMATION

Description: Bacillus amyloliquefaciens D747 Wettable Granule (CX-9030 or Amylo-X)
Active Ingredient: Bacillus amyloliquefaciens spores ≥ 5.0 x 10^10 CFU/g
Product TSCA / CAS #: NA
DOT Hazard Class: Not Regulated
OSHA Permissible Exposure Limit: NA
ACGIH Threshold Limit Value: NA

PHYSICAL DATA

Boiling Point: NA
Specific Gravity: 0.43-0.56 g/cm³
Vapor Pressure: NA
pH (1% mix. with water): 7.5-8.5
Vapor Density: NA
Odor: Yeast-like
Water Solubility: NA
Appearance: Brown Granules

HEALTH HAZARDS / EFFECTS

Hazard Statements: CAUTION
Harmful if absorbed through skin. Harmful if inhaled.
Medical Conditions Aggravated by Exposure: Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
Threshold Limit Value: Unknown
Routes of Entry: Inhalation, Broken Skin, Eyes
NTP Listing: Not Listed
Carcinogen: No

EMERGENCY AND FIRST AID PROCEDURES

Skin: Take off contaminated clothing. Rinse skin with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.
Eye: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
HEALTH PROTECTION MEASURES

Respiratory Protection: NIOSH approved respirator with any N, P, R, or HE filter
Protective Clothing: Long-sleeved shirt and long pants, waterproof gloves, shoes plus socks
Eye Protection: Use goggles. Avoid contact with eyes.
Hygienic Practices: Remove contaminated clothing/PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA
LEL: NA
UEL: NA
Extinguishing Media: All methods

REACTIVITY DATA

Hazardous Decomposition: None
Stability: Stable
Hazardous Polymerization: No
Condition to Avoid: Unknown

SPILL, DISPOSAL, AND STORAGE PROCEDURES

If Material is Spilled or Released: Recover free product. Use absorbent material to minimize runoff of mixed product.
Waste Disposal Method: Wastes resulting from the use of this product may be disposed of onsite or at an approved waste disposal facility.
Method of Storage: Store in a dry area inaccessible to children. Store in original containers only. Keep container closed when not in use.
Person to be Contacted if Spill Occurs: If significant spill occurs, contact CHEM•TEL (800) 255–3924.

Reason for Issue: Added density
Approval Date: June 27, 2012
Supersedes Date: February 22, 2012

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA nor any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All material may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.
**Product**
Double Nickel LC Biofungicide

**Company**
Certis USA
Regulatory Affairs Department
9145 Guilford Road, Suite 175
Columbia, MD 21046-1952

**Status**
Allowed with Restrictions

**Category**
NOP: Microbial Pesticides

**Issue date**
10-May-2012

**Product number**
ttc-2981

**Class**
Crop Pest, Weed, and Disease Control

**Expiration date**
01-Dec-2017

**Restrictions**
May be used for pesticidal purposes only if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.
**ALL SEASONS® HORTICULTURAL AND DORMANT SPRAY OIL® Concentrate**

**CONTROLS**  Scale Insects, Mealybugs, Apple Aphids, European Red Spider Mites, Leafminers and many more listed insects ... **USE** on pears, cherries, peaches, asparagus, corn, peppers, roses, houseplants and in home greenhouses.

---

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**NOTE:** This product is intended for small garden use only.

**NOTE:** WHEN FOLIAGE IS PRESENT, DO NOT APPLY ALL SEASONS® HORTICULTURAL AND DORMANT SPRAY OIL AT ABNORMAL TEMPERATURES (ABOVE 90°F) OR WHEN PLANTS ARE DRY (SUFFERING FOR WANT OF MOISTURE) AS IT MAY CAUSE LEAF DROP DUE TO “SHOCK.”

**ALL SEASONS® HORTICULTURAL AND DORMANT SPRAY OIL** may be used at the DORMANT STAGE (before buds show green tissue), GREEN TIP STAGE (when leaves of blossom buds are bursting and show about 1/8 to 1/4 inch of green color), DELAYED DORMANT STAGE (when leaves of the blossom buds are out from 1/4 to 1/2 inch), and during the GROWING SEASON.

**DILUTION TABLE — 2 Tablespoons = 1 Ounce**

Consult your experiment station for proper timing and choice of fungicide to use with ALL SEASONS® HORTICULTURAL AND DORMANT SPRAY OIL. Use Bonide’s Liquid Fruit Tree Spray for home orchard care. Multi-purpose, pre-blended insecticide-fungicide liquid. SHAKE WELL. Then add ALL SEASONS® HORTICULTURAL AND DORMANT SPRAY OIL to desired amount of water and mix thoroughly. Use a good pressure spray and apply enough liquid per tree to wet entire surface of branches, main limbs, and trunk. Give special attention to underside of limbs. Make application when temperature is above 40°F.

**SHADE TREES, ORNAMENTALS, ROSES: GREEN TIP THROUGH THE DELAYED DORMANT STAGES—For scale insects, certain aphids, gall, white fly larvae, mealybugs, adelgids. Use 7 1/2 Tbs. per gal. of water. For scurfy scale, use 5 fl. oz. (10 Tbs) per gal. For terrapin scale, use 7 to 8 fl. oz. per gal. of water.

GROWING SEASON—To control Scale insects, European Red Spider Mites, Mealybugs and Whitefly Larvae on Citrus (Oranges, Lemons, Grapefruit, Tangerines, Limes), Fruit Trees (Apples, Plums, Pears, Apricots, Peaches, Pecans, Cherries), Shade Trees, Evergreens, Camellias, Azaleas, Hardy Shrubs: 5 Tablespoons (2 1/2 oz.) per gal. of water. This application is also effective in the removal of sooty mold fungus through the control of Whitefly Larvae.

**FRUIT**

**BLUEBERRY:** Thrips, Mites - Use 5 Tbs. per gal. of water. Time of application - Foliage. Scales - Use 7 1/2 Tbs. per gal. of water. Time of application - Dormant.

**STRAWBERRY:** Aphids, Mites - Use 2 1/2 Tbs. per gal. of water. Time of application - Dormant and Foliage.

**GRAPE:** Mealybugs - Use 10-15 Tbs. per 2-3 gals. of water. Time of application - Dormant-A tank mix with an insecticide improves control.

**VEGETABLES**

**ASPARAGUS, BEANS, BEETS, CORN, PEPPER, RADISH, SQUASH, TOMATO:** Aphids, Mites, Beetle larvae, Leafminers, Thrips, Leafhopper, Whitefly - Use 2 1/2 - 5 Tbs. per gal. of water. Time of application - As needed.
CAUTION! Do not spray again with oil for at least a month. Do not spray drought injured or winter burned plants. Do not apply oil sprays within 30 days of sulfur applications. Injury may result if oil sprays are used on ferns, palms, hibiscus, certain conifers, including blue spruce, white pine, aborvitae and junipers and certain deciduous trees such as Japanese maple, beech, hickory, walnut and butternut. When used in knapsack or small sprayer, shake occasionally to keep solution agitated.

For Houseplants and Home Greenhouses
Do not exceed the maximum rates or apply more often than recommended. Certain plant species may be sensitive to oil. A small number of plants should be test sprayed prior to general spraying. Use caution on open blooms - bleaching and spotting have been observed on the open bloom of certain plants.

HOUSEPLANTS
CHRYSANTHEMUM, DIEFFENBACHIA, DRACAENA, FERNS, GARDENIAS, JADE PLANTS, PALMS, PHILODENDRON, SCHEFFLERA: Aphids, Leafminers, Mealybugs, Scales, Spider Mites, Whitefly* - Use 2 1/2 - 5 Tbs. per gal. of water. Do not use on Coconut Palms or Maidenhair Ferns. Chrysanthemum blooms have shown phytotoxic symptoms at the higher rate. *ALL SEASONS Horticultural and Dormant Spray oil is most effective on Whitefly during immature stages. Protect floor, floor coverings and furnishings from overspray. CAUTION: Do not exceed 3 consecutive applications without allowing a two week application interval.

HOME GREENHOUSE
AZALEAS, BEGONIAS, CAMELLIAS, CHRYSANTHEMUM, EASTER LILIES, FERNS, GARDENIASES, GERANIUM, HIBISCUS FOLIAGE, JADE PLANT, NEW GUINEA, IMPATIENS, PALMS, PHILODENDRON, PORTULACA, REIGOR BEGONIAS, ZINNIAS: Aphids, Fungus Gnat, Leafminers, Mealybugs, Scales (soft & hard), Spider Mites, Whitefly* - Use 2 1/2 - 5 Tbs. per gal. of water. Do not use on Coconut Palms or Maidenhair Ferns. The blooms of Chrysanthemum and Geranium have shown phytotoxic symptoms at the 5 Tbs. rate. Frequency of Application: For the greenhouse pests listed, use once a week initially, then as the pest is controlled, decrease the frequency to every 2-3 weeks as needed. Dieffenbachia, Poinsettias - Use 2 1/2 Tbs. per gal. of water. Do not use on Poinsettia bracts. Leaf Polish for Hardy Plants-use 2 1/2 Tbs. per gallon of water. *ALL SEASONS Horticultural and Dormant Spray oil is most effective on Whitefly during immature stages.

STORAGE AND DISPOSAL
Storage: Store and transport in upright position. Keep container tightly closed to prevent evaporation. Do not store near or contaminate feed or foodstuffs. Do not use, pour, spill or store near heat or open flame. Store in a cool, dry area inaccessible to children and pets.

Disposal: Do not reuse empty container. Wrap container and put in trash collection. Pesticide Disposal: Securely wrap original container in several layers of paper and discard in trash.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS-CAUTION
May be harmful if swallowed, inhaled or absorbed through the skin. Do not get in eyes, on skin or on clothing. Avoid breathing spray mist. In case of contact, wash immediately with soap and warm water. Wash hands, arms, and face thoroughly with soap and warm water before eating or smoking. Wash all contaminated clothing with soap and hot water before re-use. Should poisoning occur, get medical aid. If swallowed do not induce vomiting. Call a physician immediately.

FIRST AID
If Swallowed: Call a physician or Poison Control Center. Do not induce vomiting because of aspiration hazard. If on Skin: Wash with soap and water. If in Eyes: Flush with plenty of water. If Inhaled: Remove person to fresh air. ENVIROMENTAL HAZARDS
This product is toxic to fish. Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters. Apply this product only as specified on the label.
IDENTITY (As Used on Label and List)
Bonide All Seasons Horticultural & Dormant
Spray Oil Concentrate
ID # 480
Date: August 14, 2001

Section I

Bonide Products, Inc. (800) 424-9300
6301 Sutliff Road (315) 736-8231
Oriskany, NY 13424

Section II - Hazardous Ingredients/Identity

<table>
<thead>
<tr>
<th>Hazardous Components (Specific Chemical Identity: Common Name(s)</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
<th>% (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Oil</td>
<td></td>
<td></td>
<td></td>
<td>98.80</td>
</tr>
</tbody>
</table>

Section III - Physical/Chemical Ingredients

| BOILING POINT: >200°F (wide range) | SPECIFIC GRAVITY: 0.85 |
| VAPOR PRESSURE (MM. of Mercury): <0.0001 | VAPOR DENSITY (AIR=1): 10+ |
| PERCENT VOLATILE (BY VOLUME): Negligible | SOLUBILITY IN WATER: Emulsifies in water |
| AUTOIGNITION TEMPERATURE: 650°F (est.) | DENSITY: 7.08 lbs/gal |
| EVAPORATION RATE (BUTYL ACETATE=1): Lower than Butyl Acetate | |
| APPEARANCE AND ODOR: Clear, colorless, oily liquid with virtually no odor. |

Section IV - Fire and Explosion Data

| FLASHPOINT: >200 F | FLAMMABLE LIMITS (PERCENT BY VOLUME): NE |
| FIRE EXTINGUISHING MEDIA: Can be made to burn; ease of burning is directly related to temperature. Dry Chemical, CO2, Foam, Water Spray or Fog. |
| SPECIAL FIRE FIGHTING PROCEDURES: Smoke and fumes from fire may contain hazardous components. Use self-contained breathing apparatus and full protective clothing. Fight fire from upwind side. |
| UNUSUAL FIRE AND EXPLOSION HAZARDS: If water is used to fight fire or cool containers, contain run-off by digging to prevent contamination of water supplies. |

Section V - Reactivity Data

| STABILITY: Stable | CONDITIONS TO AVOID: Excessive Heat |
| HAZARDOUS POLYMERIZATION: Will not occur | Conditions to AVOID: NE |
| HAZARDOUS DECOMPOSITION PRODUCTS: Unknown hazardous materials may be formed in a fire situation. Incomplete combustion may lead to formation of carbon monoxide and/or other asphyxiants. |
| INCOMPATIBILITY (Materials to avoid): | Strong Oxidizers |

Section VI - Health Hazard Information

| ROUTES OF ENTRY: Ingestion, inhalation, eyes and skin contact. MOST LIKELY ROUTE OF ENTRY: Dermal product is considered to be of low to moderate toxicity. May be harmful if swallowed or inhaled. May cause irritation of eyes, nasal passages, throat and skin. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis or other skin reactions, possible due, in part, to the removal of some natural oils and fats from the skin. |
| EMERGENCY AND FIRST AID PROCEDURES: Call a physician immediately in all cases of suspected poisoning. |
| INGESTION: Drink 1 or 2 glasses of water to dilute material. Do not induce vomiting, as potential aspiration may induce chemical pneumonia. EYES: Flush with running water for at least 15 minutes while holding eyelids open. If irritation persists, get medical attention. SKIN: Remove all contaminated clothing. Wash skin and hair thoroughly with soap and water. Wash clothing before reuse. If irritation persists, get medical attention. INHALATION: Remove to fresh air. If irritation persists, get medical attention. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known. Preexisting skin or respiratory disorders may be aggravated by excessive exposure to this material. |
| POTENTIAL CARCINOGEN STATUS: Tests on laboratory animals with highly-refined oils such as those contained in this product have shown no evidence of carcinogenicity. None of the other components in this product is listed by IARC, NTP or OSHA as a carcinogen. |
Section VII - Precautions for Safe Handling/Use

HANDLING AND STORAGE: Store in a cool, dry place away from children, domestic animals, food and feed products. Do not contaminate other stored products or the storage area by handling or storage of this product. Immediately clean up any spills which occur during handling and storage.

OTHER PRECAUTIONS: Do not contaminate water supplies by handling or storage of product, cleaning of equipment or disposal of wastes. Keep work and storage areas clean. Read and follow precautionary measures on product label.

RESPIRATORY PROTECTION (Specify type): Not normally required. If vapors may exceed acceptable levels, wear MSHA/NIOSH-approved respirator or mask to protect against pesticide dusts, mists and vapors.

VENTILATION:
- LOCAL EXHAUST: Not normally required
- SPECIAL: Not normally required
- MECHANICAL (General): Not normally required. Use if ventilation is not adequate.
- OTHER: Work in a well-ventilated area

PROTECTIVE GLOVES: Work gloves or impervious gloves. If prolonged exposure cannot be avoided, wear impervious gloves.

EYE PROTECTION: None normally required; follow local work rules. Chemical goggles or shielded safety glasses recommended for prolonged or repeated exposure.

OTHER PROTECTIVE EQUIPMENT: Wear clothing consistent with good practices for handling and applying pesticides. Wash clothing before reuse.

Section VIII - Environmental and Disposal Information

SPILL OR LEAK PROCEDURES: Contain spill; absorb liquids by covering with clay or other absorbent material; vacuum, scoop or sweep up wastes and place in container for disposal.

WASTE DISPOSAL METHOD: Material which cannot be used at the site should be disposed of in an approved waste disposal facility following all applicable Federal, State and local regulations. Triple rinse empty containers and offer for recycling or reconditioning, or puncture and dispose of in an approved sanitary landfill. Do not contaminate water supplies by disposal of wastes or containers.

NOTICE: This information is believed to be accurate and reliable. However, no guarantee expressed or implied is made with respect to the information contained herein.

KEEP OUT OF REACH OF CHILDREN

ABBREVIATION KEY

N/A: NOT AVAILABLE OR APPLICABLE  N/E: NOT ESTABLISHED  ND: Not Determined
TLV: THRESHOLD LIMIT VALUE  TWA: TIME WEIGHTED AVG./8 HOUR WORKDAY
STEL: SHORT TERM EXPOSURE LIMIT  D.O.T.: DEPARTMENT OF TRANSPORTATION

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES
Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.
Neemix 4.5
INSECT GROWTH REGULATORY
BIOLOGICAL INSECTICIDE

An Insecticide for Use on Vegetables, Fruits, Turf (including Commercial Lawns), and other Crops Grown in the Field or In and Around Commercial Nurseries, Greenhouses, and Mushroom Houses. Kills/repels a variety of insect pests including whiteflies, loopers, caterpillars, leafminers, psyllids, mealybugs, and larvae of diamondback moths.

ACTIVE INGREDIENT:
Azadirachtin: .......................................................... 4.5%
OTHER INGREDIENTS: .................................................. 95.5%
TOTAL: .................................................................. 100.0%

This product contains 0.39 lb. (175 g) of azadirachtin per US gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION
Si usted no entienda la etiqueta, busque a alguien que la le explique en detalle.
(If you do not understand this label, find someone to explain it to you in detail).

See attached booklet for additional Precautionary Statements, First Aid Statements, Directions for Use, and Storage and Disposal Statements.

CAN BE USED IN ORGANIC PRODUCTION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Avoid contact with skin, eyes or clothing. Harmful if swallowed or inhaled. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

FIRST AID

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Hot Line Number: 1-800-225-3924.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category C on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:
• Long-sleeved shirt and long pants
• Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polychloroprene (PVC), or Viton.
• Shoes plus socks
• Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not re-use them.

USER SAFETY RECOMMENDATIONS

Users Should:
• Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
• Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
• Remove PPE immediately after handling this product. Wash the outside of gloves before removing.
• As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product may be hazardous to fish and aquatic invertebrates. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinses.

PHYSICAL AND CHEMICAL HAZARDS

Combustible: Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 190. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow workers entry into treated areas during the restricted entry interval (REI) of 4 hours.

For entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:
• Coveralls.
• Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polychloroprene (PVC), or Viton.
• Shoes plus socks.
• Protective eyewear

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 190). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses. For other uses including golf courses, and other non-agricultural uses, do not enter treated areas without protective clothing until sprays have dried.

PREHARVEST INTERVAL

NEEMIX 4.5 can be applied up to and including the day of harvest (zero PHI). Individual state regulations may vary and should be consulted for allowable preharvest interval.

MODE OF ACTION

This product controls targeted insect larvae when they ingest or come in contact with it, by interfering with the insect’s ability to molt. It is effective on all larval or nymphal stages. It also reduces crop damage by repelling and deterring feeding of all stages of insects.

SPLAY EQUIPMENT

Use any suitable ground, aerial, or hand application equipment that allows for uniform coverage of the targeted treatment area.

GENERAL INFORMATION

• Broad Spectrum Insect Growth Regulator Insecticide
• Not for use in food-handling establishments.
• Shake well before using.
• Kills only immature stages (larvae or nymphs) of insects. Treated larvae may die as pupae.
• Make applications when pests first appear and are in their early larval stages. Repeat applications every 7 days or as needed.
• Botanical Insecticide Concentrate.
• Spraying directly onto the pest and a longer duration of leaf wetting increases effectiveness. Apply in early to mid-morning or late afternoon.
• The pH of spray solutions containing NEEMIX 4.5 must be kept between 3 and 8. Use spray solutions within 4 hours of preparation for maximum effectiveness. Do not store diluted solution for later use.
• Do not apply to wilted or otherwise stressed plants, or to newly transplanted material prior to root establishment.
• Do not apply to known spray sensitive plants without testing.
• NEEMIX 4.5 has been found to be compatible when used in conjunction with most beneficial insects. Conduct a small trial to assure compatibility before using on a large scale.
• Use with care when applying near streams, ponds, lakes or bodies of water.
• Do not apply NEEMIX 4.5 when weather conditions favor drift or the likelihood of runoff is high.
• For best results, add a spreader-sticker or oil-based adjuvant (such as methylated seed oil) at the label rate.
• This product may be pre-mixed in a supply tank with water, fertilizer or other appropriate agricultural chemicals. Agitation is necessary (see Mixing Directions). Drop or spray of effectiveness can result if uniform distribution is not achieved.
• When pest populations are high, use the higher label rates.
TANK MIXING

NEEMIX® 4.5 Insect Growth Regulator has been found to be compatible with most commonly used fungicides, insecticides, and fertilizers. Check physical compatibility first by using the correct proportion of products in a small jar test. Then, test tank-mix combinations for phytotoxicity on a sample of plants prior to use. This must be done with combinations used under the same environmental conditions as will prevail on the farm. Add Neemix® 4.5 with oxidizing agents such as bleach, or strong acids and bases as they will destabilize the product.

DIRECTIONS FOR USE ON FIELD-GROWN FOOD CROPS

GENERAL DIRECTIONS: Use care when applying near streams, ponds, lakes or other bodies of water. Do not apply NEEMIX® 4.5 when weather conditions favor drift or when the likelihood of runoff is high.

SPECIFIC CROPPED DIRECTIONS:

Application Rate: Apply 0.25 – 1 pint (4 – 16 fl. oz.) of NEEMIX® 4.5 per acre using suitable ground or aerial application equipment, in a manner to obtain uniform and complete plant coverage. For agronomic crops apply using conventional ground application equipment in a minimum of 30 gallons of water and aerial application equipment in a minimum of 3 gallons of water. Avoid over-spraying to the point of excessive runoff. Refer to the table below for application rates against selected pests. Use the low rate as a preventative when pest pressure is low, or if used in conjunction with adulticides. Otherwise, use the high rate. The maximum application rate is 20 grams active ingredient or less per acre according to the tolerance exemption (40 CFR 180.1119).

**Application Rates for Whilties, Aphids, Leafminers, Worms, and Other Pests**

<table>
<thead>
<tr>
<th>Pest</th>
<th>Rate of Neemix® 4.5 Per Acre</th>
<th>Frequency</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whilties: Low Pressure High Pressure</td>
<td>4 – 7 fl. oz.</td>
<td>4 – 10 days</td>
<td>Foliar application against nymphs</td>
</tr>
<tr>
<td>Aphids</td>
<td>5 – 7 fl. oz.</td>
<td>7 – 10 days</td>
<td>Suppression of nymphs and adult feeding deterrence</td>
</tr>
<tr>
<td>Leafminers: Linomyza spp. and Citrus Leafminers Phyllocnistis citrella</td>
<td>4 – 7 fl. oz.</td>
<td>14 – 21 days</td>
<td>Foliar application against larvae and nymphs</td>
</tr>
<tr>
<td>Lepidoptera larvae (caterpillars or worms) feeding on foliage or fruit</td>
<td>4 – 10 fl. oz.</td>
<td>7 – 10 days</td>
<td>Foliar application against larvae</td>
</tr>
<tr>
<td>Others (including: Borer, Leaffilter, Looper)</td>
<td>7 – 16 fl. oz.</td>
<td>7 – 10 days</td>
<td>Foliar application against larvae or nymphs</td>
</tr>
</tbody>
</table>

**Apply in sufficient water to obtain adequate plant coverage, typically 30 – 100 gallons per acre by ground or 3 – 5 gallons per acre by air.**

DIRECTIONS FOR USE IN GREENHOUSES (OR OTHER COVER) AND PLANT NURSERIES

For Use on Vegetables, Melons, Strawberries, and Other Food Crops Raised for Transplanting to Production Fields. For Use on Bearing and Nonbearing Fruit and Nut Trees, Grapevines, Cranberries, and Other Small Fruits. Apply NEEMIX® 4.5 at the indicated rates in sufficient water to ensure adequate plant coverage. Use 1-2 gallons of spray solution per 1,000 square feet, or a minimum of 30 gallons of water per acre for conventional application equipment (3 gallons of water per acre for low/ultralow volume equipment).

**Pests controlled by NEEMIX® 4.5**

<table>
<thead>
<tr>
<th>Pest</th>
<th>Rate of Neemix® 4.5 per 100 gallons of water</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aphids</td>
<td>10 – 16 fl. oz.</td>
<td>Foliar application for suppression and adult feeding deterrence</td>
</tr>
<tr>
<td>Armymworms</td>
<td>4 – 16 fl. oz.</td>
<td>Foliar application against larvae.</td>
</tr>
<tr>
<td>Borer, including Peach Twigg Borer, Peach Borer, and Squash Vine Borer</td>
<td>4 – 16 fl. oz.</td>
<td>Foliar application against young larvae before boring or tun- neling in the plant.</td>
</tr>
<tr>
<td>Caterpillar Loopers, and other Lepidoptera Larvae (worms)</td>
<td>4 – 16 fl. oz. (Except as noted at right)</td>
<td>Foliar application against larvae feeding externally on leaves, fruits, other external plant parts.</td>
</tr>
<tr>
<td>Colorado Potato Beetle &amp; other leaf-feeding beetles</td>
<td>4 – 16 fl. oz.</td>
<td>Foliar application against leaf-feeding larvae.</td>
</tr>
<tr>
<td>Cutworms</td>
<td>5 – 16 fl. oz.</td>
<td>Foliar application against larvae feeding on leaves or stems.</td>
</tr>
<tr>
<td>Leaffilter</td>
<td>10 – 16 fl. oz.</td>
<td>Foliar application against nymphs.</td>
</tr>
<tr>
<td>Lefllorells</td>
<td>4 – 16 fl. oz.</td>
<td>Foliar application against larvae.</td>
</tr>
<tr>
<td>Scales</td>
<td>6 – 16 fl. oz.</td>
<td>Foliar or stem application targeting crawler stages.</td>
</tr>
<tr>
<td>Whilties</td>
<td>6 – 16 fl. oz.</td>
<td>Foliar application against nymphs. Spray should be directed to undersides of leaves.</td>
</tr>
</tbody>
</table>

*When using lower rates (less than 10 fl. oz.), combine NEEMIX® 4.5 with an approved adjuvant such as a non-phytotoxic crop oil, up to 4% for improved spray coverage and translaminar uptake. Always use sufficient spray volume to ensure good coverage of all plant parts. Treat early and target youngest larvae or nymphs for best control. Repeat applications every 7-10 days or as needed to maintain pest control.*

DIRECTIONS FOR COMMERICAL LAWNS AND TURF

**Surface-Feeding Insects:**

For use to control cutworms, armyworms, sod webworms, crickets, chinach bugs, leaffilters, and grasshoppers. Apply at first sign of pest presence or damage to turf. Do not apply if rain is forecast within the next 24 hours.

Apply 1 quart – 3 gallons of NEEMIX® 4.5 per acre (0.75 – 9 fluid ounces per 1,000 square feet) using enough spray volume to obtain thorough coverage and penetration of the turf canopy. Use 2 – 5 gallons of diluted material per 1,000 square feet, or 50 – 100 gallons of diluted material per acre. The treated area may be lightly irrigated for 3 – 5 minutes after application if desired to increase penetration of the turf surface. Do not water turf again within 24 hours after application. Do not mow again within 3 days after application.

For use to control white grubs (Japanese beetles, European chafers, dung beetles, June beetles, green June beetles, May beetles, annual white grubs, grub beetles, southern masked chafers, etc.) and crane fly larvae (leatherjackets):
- For white grubs, make application soon after adults emerge in summer (1 – 3 weeks after first sign of adult emergence). Leatherjackets should be targeted as young larvae while feeding near the soil surface.
- Apply 1 quart – 3 gallons of NEEMIX® 4.5 per acre (0.75 – 9 fluid ounces per 1,000 square feet) using enough spray volume to obtain thorough coverage and penetration of the turf. Use 50 – 100 gallons of diluted material per acre, or 2 – 5 gallons of diluted material per 1,000 square feet.
- Reapply as necessary. Repeat treatment in early to mid fall to control possible second generation.

**Nematodes:**

Apply 1 quart – 3 gallons of NEEMIX® 4.5 per acre (0.75 – 9 fluid ounces per 1,000 square feet) using enough spray volume to obtain thorough coverage. Use 2 – 5 gallons of diluted material per 1,000 square feet. Repeat as necessary.

**DIRECTIONS FOR MUSHROOMS**

**Compost Treatment** (Post-Pasteurization): After the compost has cooled, but prior to broadcasting sprays, dilute 2 – 4 fl. oz. of NEEMIX® 4.5 with 25 gallons of water, mix thoroughly, and apply as a fine spray over the compost surface (25 gallons treats 1,000 square feet).

**Post Planting** (Spawning Treatment): Dilute 1 – 2 fl. oz. of NEEMIX® 4.5 with 25 gallons of water, mix thoroughly, and apply as a fine spray to the surface (25 gallons treats 1,000 square feet). Repeat every 7 – 10 days.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage and disposal.

**PESTICIDE STORAGE:** Wastes resulting from the use of this product must be disposed of on site or as an approved waste disposal facility.

**CONTAINER HANDLING:** Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and reciap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or punctuate and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**WARRANTY**

Certis USA, L.L.C. warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather conditions, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage or handling of this material in strict accordance with directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

**INSECTS AND OTHER PESTS CONTROLLED BY NEEMIX® 4.5**

**Aphids, such as:**
- Apple Aphid
- Green Peach Aphid
- Cabbage Aphid
- Cotton Aphid
- Potato Aphid
- Watermelon Aphid
- Wooly Apple Aphid

**Beetle Larvae, Weevil Larvae, and Grubs, such as:**
- Black Beetles
- Bean Leaf Beetle
- Black Vine Weevil
- Borer Beetles
- Bluegrass Weevil
- Boll Weevil
- Chafers (see list below)
- Chestnut Weevil

**Colorado Potato Beetle & other leaf-feeding beetles**

**Cutworms**

**Leaffilter**

**Leaffilter**

**Scales**

**Whilties**

*Insects and other pests controlled by Neemix® 4.5*

(continued)
Fruiting Vegetables, grass grown for hay, forage, or animal feed.

Cucurbit Vegetables and Melons, such as:

Bulb Vegetables, such as:

Maggots (Fly larvae), Leafrollers, Leafhopper Leafhoppers, Leaffolders and Leaftiers

Crickets, such as: European Chafer, Northern Masked Chafer, Rose Chafer, and Southern

Cutworms (see list below)

Fungus Gnat

Fruit flies

Crane Fly

Moth Larvae

Leafrollers (continued)

Armyworms, Bollworms, Budworms, Caterpillars, Fruitworms, Loopers, Webworms, and Other

Crops on which Neemix® 4.5 can be used:

Herbs and Spices, such as:

Insects and other pests controlled by Neemix® 4.5 (continued)

Crops on which Neemix® 4.5 can be used:

Frutet Leaf rollers

Crickets, such as: Mole Cricket and Mormon Cricket

Caterpillars, Fruitworms, Loopers, Webworms, and Other

Spittlebugs

Sawflies

Marsh Flowers, Crane Flies, and Leatherjackets

Mealybugs

Millipedes

Moth larvae, such as:

Root and Tuber Crops, such as:

Small Fruits and Berries, such as:

Stone Fruits, such as:

Turfgrass, such as:

Miscellaneous Crops, such as:

Chemigation Bulletin

GENERAL INFORMATION:

Apply this product only through drip (nibble); sprinkler (solid set, lateral move, end move, center pivot, or hand move); flood (basin); furrow, or border irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Public water system means a system for the provision to the public of piped water for human consumption that has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

**Drip Tricklem Chemication:**

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the application rate evenly to the entire treated area.

**Sprinkler Chemication:**

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must also contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply when soils are moderately moist. Use volumes that thoroughly wet the foliage and/or soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the application rate evenly to the entire treated area.
8. Do not apply when wind speed favors drift beyond the area intended for treatment.

**Flood (Basin), Furrow and Border Chemication:**

1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential of water source contamination from the backflow if water flow stops.
2. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
   a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
   b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
   c. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
   d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
   e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
   f. Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
3. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff. Application should be continuous in sufficient water to apply the application rate evenly to the entire treated area.
PRODUCT INFORMATION

Trade Name: Neemix® 4.5
Description: Botanical Agricultural Insecticide / Insect Growth Regulator
Active Ingredient: Azadirachtin (4.5%)
Inert Ingredients: Proprietary solvent / surfactant blend

CAS #: 11141-17-6 OSHA PEL: NA
DOT Shipping Name: NA ACGIH TLV: NA
DOT Hazard Class: Not Regulated

PHYSICAL DATA

Boiling Point: 77°C Specific Gravity: 0.951 g/mL
Vapor Pressure: Not Determined Evaporation Rate: Not Determined
Vapor Density: Not Determined Odor: Disinfectant
Water Solubility: Slightly soluble in water Appearance: Dark brown liquid

HEALTH HAZARDS / EFFECTS

Hazard Statements: WARNING Keep out of Reach of Children
Exposure Signs and Symptoms: Repeated exposure may cause skin sensitization.
Medical Conditions Aggravated by Exposure: None noted
Threshold Limit Value: Not determined
Routes of Entry: Eyes, skin, oral, inhalation
NTP Listing: Not Listed
Carcinogen: No

EMERGENCY AND FIRST AID PROCEDURES

Skin: Wash with plenty of soap and water.
Eyes: Hold eyelids open and flush with a steady, gentle stream for 15 minutes.
Inhalation: Remove victim to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. Get medical attention if irritation persists. Call a physician or poison control center. Drink 1 or 2 glasses of water. Do not induce vomiting.
HEALTH PROTECTION MEASURES

Respiratory Protection: NIOSH approved organic vapor respirator.  
Ventilation: Use under well ventilated conditions.  
Protective Clothing: Long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves.  
Eye Protection: Protective eyewear  
Hygienic Practices: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not re-use them.

FIRE AND EXPLOSION HAZARD DATA

Flash Point: 67°C  
Flammable Limits: Not Determined  
Extinguishing Media: Foam, Dry Chemical  
LEL: NA  
UEL: NA

REACTIVITY DATA

Hazardous Decomposition: None known  
Hazardous Polymerization: Will not occur  
Stability: Stable  
Condition to Avoid: Open flame, temperatures above 95°F

SPILL, DISPOSAL, AND STORAGE PROCEDURES

If Material is Spilled or Released: Recover free product. Use absorbent material to minimize runoff of mixed product.  
This product may be hazardous to fish and aquatic invertebrates. Do not contaminate water when cleaning equipment or disposing of equipment wash waters. Rinse water and unused diluted product may be disposed on site or in an approved waste disposal facility.  
Waste Disposal Method: Do not store above 95°F  
Method of Storage: State extension or Experiment Station Specialist. If significant spill occurs, contact CHEM•TEL (800) 255–3924.  
Person to be Contacted if Spill Occurs:  
Reason for Issue: MSDS Format Change  
Approval Date: July 17, 2003  
Supersedes Date: May 04, 2001

To the best of our knowledge, the information contained herein is accurate. However, neither Certis USA nor any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All material may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.
Product
Neemix® 4.5 Insect Growth Regulator Biological Insecticide

Company
Certis USA
Regulatory Affairs Department
9145 Guilford Road, Suite 175
Columbia, MD 21046-1952

Status
Allowed with Restrictions

Category
NOP: Neem Extract and Derivatives

Issue date
01-Mar-1998

Product number
ttc-0550

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Dec-2017

Restrictions
May be used as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the current OMRI Standards Manual®. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Products List® at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator’s responsibility to properly use the product, including following any restrictions.

OMRI Listed
The following product is OMRI Listed. It may be used in certified organic production or food processing and handling according to the USDA National Organic Program Rule.

Peggy Miers
Executive Director

Organic Materials Review Institute
P.O. Box 11558, Eugene, OR 97440-3758, USA
541.343.7600 • fax 541.343.8971 • info@omri.org • www.omri.org
FOSPHITE®
Fungicide

GROUP 33 FUNGICIDE

A FUNGICIDE FOR THE CONTROL OF DOWNY MILDEW, PHYTOPHTHORA, PYTHIUM AND VARIOUS OTHER DISEASES ON AGRICULTURAL AND GREENHOUSE CROPS, INDOOR AND OUTDOOR ORNAMENTALS, BEDDING PLANTS, TURF, FORESTRY APPLICATIONS AND DOMESTIC TREES, INCLUDING CONIFERS, PINES, OAKS, POST-HARVEST TREATMENT OF POTATOES FOR PINK ROT AND LATE BLIGHT, AND POST-HARVEST CONTROL OF PENCILLIUM DIGITATUM (GREEN MOLD), PENCILLIUM ITALICUM (BLUE MOLD) AND PHYTOPHTHORA SPP. (BROWN ROT) ON CITRUS FRUIT.

ACTIVE INGREDIENT:
Mono-and dipotassium salts of Phosphorous Acid* ........... 53.0%
OTHER INGREDIENTS: .................................................. 47.0%
TOTAL: ........................................................................ 100.0%

*Contain 6.22 lb/gallon of the active ingredients, mono-and di-potassium salts of Phosphorous Acid. Equivalent to 3.90 lb Phosphorous Acid/gallon.

SHAKE WELL BEFORE USE
KEEP OUT OF REACH OF CHILDREN

CAUTION
See inside booklet for First Aid and additional precautionary statements.
FOR MEDICAL EMERGENCIES CALL 1-800-858-7378

NET CONTENTS: 4 x 1 Gallon (15.14 liters)
☐ 2 x 2.5 Gallons (18.925 liters)

Lot #: EPA Reg No.: 68573-2
EPA Est. No.: 68573-CA001

Manufactured by: JH Biotech, Inc.
LIMIT OF LIABILITY AND WARRANTY

Fosphite is supplied as a high-grade material and is suitable for the purpose for which it is expressly intended and must be used in strict accordance with the conditions for use. Manufacturer or seller makes no warranty, whether expressed or implied, concerning the use of this product other than for the purposes indicated on the label. Neither manufacturer nor seller shall be liable for any injury or damage caused by this product due to misuse, mishandling or any application not specifically described on the label.

Distributed in Australia exclusively by:
Zadco For Quality Gro PTY LTD. ABN 57060 759 084
9/9A Foundry Road, Seven Hills NSW 2147 Ph: 02 9838 9111 Fax: 02 9838 9110
email: inquiries@zadco.com.au website: www.zadco.com.au

CAUTION
KEEP OUT OF THE REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

FOSPHITE
SYSTEMIC FUNGICIDE

ACTIVE CONSTITUENT
460g/L phosphorous (phosphonic) acid
present as mono-di potassium phosphate

GROUP Y FUNGICIDE

For the control of Downy Mildew and Phytophthora on crops
and situations nominated in the directions for use

Available Pack Sizes
1 Litre
3.785 Litres
18.92 Litres
**Directions for use**

**Restraints:** DO NOT apply Fosphite at rates that cause excessive run off.

## Tree and Vine Crops

<table>
<thead>
<tr>
<th>Crop</th>
<th>Disease</th>
<th>State</th>
<th>Method of application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avocado</td>
<td>Phytophthora</td>
<td>QLD, NSW, VIC, SA, WA</td>
<td>Stem Injection</td>
</tr>
<tr>
<td></td>
<td>Root Rot Phytophthora Cinnamomi</td>
<td>and ACT only</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>only</td>
<td></td>
</tr>
</tbody>
</table>

**SAFETY DIRECTIONS**

May irritate the eyes and skin. Avoid contact with eyes and skin. Wash hands after use.

Do not inhale spray mist. When preparing spray and using prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length PVC gloves, goggles and disposable face mask. If clothing becomes contaminated with product or wet with spray, remove clothing immediately. If product is on skin, immediately wash area with soap and water. If product is in eyes, wash out immediately with water.

After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day’s use, wash gloves, goggles and contaminated clothing.

**FIRST AID**

If poisoning occurs, contact a doctor or the Poisons Information Centre (Telephone 131 126).

**MATERIAL SAFETY DATA SHEET**

If additional hazard information is required, refer to the Material Safety Data Sheet.
DO NOT use acidifying type compatibility agents. To determine compatibility of Fosphite with other products conduct a jar test at correct proportions of water and chemicals. Phytotoxicity may be determined if a combination is phytotoxic to a specific crop, spray a few plants/trees, and then evaluate 3-7 days later for visual symptoms.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

This product is harmful to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Spillage should not be directed to drains but absorbed in sawdust and the absorbent material disposed of in a sealed container at an approved disposal site. Triple or preferably pressure rinse containers before disposal. Add rinsing to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury containers below 500mm in a disposal area specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Restraints: DO NOT apply Fosphite at rates that cause excessive run off.

<table>
<thead>
<tr>
<th>Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trunk injection, Skeletal Trees:</strong> 1st year 6 5ml undiluted product per metre of canopy diameter</td>
<td>Inject trees at spring flush maturity. Repeat treatment in February or March. Drill holes 5mm in diameter and 25-50mm deep at a slight downward angle into the trunk. Injections should be made into the main trunk of the tree and aligned evenly around the circumference of the trunk. Suitable with most tree injectors. Please read injectors’ operators’ manual to confirm suitability.</td>
</tr>
<tr>
<td>Other situations: 3 25ml of product diluted with 7.5ml of water per metre of canopy</td>
<td>DO NOT inject trees during winter months. DO NOT prune back trees before the injection process as burning of new growth may occur. DO NOT cut back the canopies of injected trees. DO NOT add anything other than water to Fosphite for trunk injection. DO NOT inject more liquid into fewer syringes than directed. Solution concentration: 176-215ml/100L Amount per unit: Spray to run off 7.5 to 10L dilute solution per adult tree Curative: Apply every 3 weeks until disease is under control Preventative: Apply every 5-6 weeks</td>
</tr>
<tr>
<td>4 3 - 5 2L/ha</td>
<td></td>
</tr>
</tbody>
</table>
**GROUP Y FUNGICIDE**

**FUNGICIDE RESISTANCE WARNING**

Fosphite is a member of the Multi-site Activity group of fungicides. For fungicide resistance management Fosphite is a Group Y Fungicide. Some naturally occurring fungal populations resistant to Fosphite and other Group Y fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungi population if these fungicides are used repeatedly. These resistant fungi will not be controlled by Fosphite and other group Y fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, Zadoq for Quality Gro P/L accepts no liability for any losses that may result from the failure of Fosphite to control resistant fungi.

**MIXING**

Half fill spray vat and with agitation system running, add required amount of product.

**COMPATIBILITY**

Fosphite is compatible with most products used in agriculture; however, crop sensitivity to these mixtures may vary. In particular, mixtures of Fosphite with foliar fertilizers and copper products may not be compatible or may cause phytotoxicity to certain plants. **Do not apply Fosphite foliarily to plants treated with copper based compounds at less than 21 day intervals.**

---

**Tree and Vine Crops (cont)**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Disease</th>
<th>State</th>
<th>Method of application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citrus: Young or small trees</td>
<td>Phytophthora Root rot &amp; Collar rot</td>
<td>Phytophthora Nicotianae Phytophthora Citrophthora</td>
<td>ALL STATES</td>
</tr>
<tr>
<td>Citrus: Mature</td>
<td>Phytophthora Root rot &amp; Collar rot</td>
<td>Phytophthora Nicotianae Phytophthora Citrophthora</td>
<td>ALL STATES</td>
</tr>
</tbody>
</table>
GENERAL INSTRUCTIONS:
For effective disease control, good leaf cover must be achieved before a widespread disease outbreak occurs.

CONDITIONS CONducive TO Downy MildeW inFECTION

PRIMARY INFECTION:- Overnight conditions of;
- Temperature 10°C
- Rainfall 10mm
- Soil Wetness 24hrs
- Leaf wetness 3-4 hrs at end of a 24hr period

SECONDARY INFECTION:- Overnight conditions of;
- Temperature 11°C
- Humidity 98% for at least 4 hours from mid-night to dawn
- Leaf wetness 24hr

TO AVOID RESISTANT STRAINS OF DOWNY MILDEW DEVELOPING, FOSPHITE SHOULD BE APPLIED AS CLOSE AS POSSIBLE TO THE DAY OF INFECTION AND ALTERNATED WITH OTHER SYSTEMIC FUNGICIDES.

Restraints: DO NOT apply Fosphite at rates that cause excessive run off.

<table>
<thead>
<tr>
<th>Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>220 – 430mL/100L</td>
<td>Two applications:</td>
</tr>
<tr>
<td>to leaf wetness by boom or similar high volume sprayer</td>
<td>1. Late winter prior to flowering.</td>
</tr>
<tr>
<td></td>
<td>2. Autumn applied to mature fruit.</td>
</tr>
<tr>
<td>17.3L/ha in 3000-4000L</td>
<td>Repeat applications annually to maintain protection of the plant.</td>
</tr>
<tr>
<td>70ml/12L/tree</td>
<td>Depending on condition at time of application use a non-ionic wetting agent with Fosphite.</td>
</tr>
<tr>
<td>10.8L/ha in 2000-5000L of water</td>
<td>WHERE DISEASE INCIDENCE IS HIGH OR WELL ESTABLISHED</td>
</tr>
<tr>
<td>43ml/12L/tree</td>
<td>For effective control apply as a protectant before above ground symptoms of decline and collar rot become evident, spray trees for even coverage. Do not apply under high temperatures (above 35°C) particularly if humidity is low or to moisture stressed trees.</td>
</tr>
<tr>
<td></td>
<td>LOW PHYTOPHTHORA PRESSURE, WELL DRAINED SOIL</td>
</tr>
<tr>
<td></td>
<td>Removal of fruit from affected plants will enhance recovery. WARNING, young container grown mandarin trees may develop leaf burn and growth retardation following foliar application or soil drench of Fosphite at rates recommended for established trees.</td>
</tr>
</tbody>
</table>
**Tree and Vine Crops (cont)**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Disease</th>
<th>State</th>
<th>Method of application</th>
<th>Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grapes</td>
<td>Downy Mildew</td>
<td>ALL STATES</td>
<td>Foliar Spray</td>
<td>650ml/ha approximately 200L water/ha</td>
<td>Apply 8-9 days after first irrigation but before second irrigation. Apply in the Autumn when subterranean clover is at the cotyledon to unifoliate leaf growth stage.</td>
</tr>
</tbody>
</table>

**Restraints:** DO NOT apply Fosphite at rates that cause excessive run off.

**Restraints:** DO NOT apply Fosphite at rates that cause excessive run off.

**ONTRARY TO THE LABEL UNLESS AUTHORISED UNDER AP-**
**Directions for use**

Restraints: DO NOT apply Fosphite at rates that cause excessive run off.

**Non Tree and Vine Crops (cont)**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Disease</th>
<th>State</th>
<th>Method of application</th>
<th>Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subterranean Clover</td>
<td>Phytophthora Root Top</td>
<td>NSW, VIC, TAS, SA, WA, ONLY</td>
<td>Foliar Spray</td>
<td>2.6L/ha Early season, small canopies</td>
<td>It is essential that the rate of Fosphite is adjusted to the vine-row volume (ie; the volume of the vine foliage per hectare). An application 500L/ha is suggested at the start of the season, increasing to 2000L/ha in a vigorous crop at full canopy. Spray timing is critical. For the best results apply Fosphite as a tank mix with protectant fungicides such as Mancozeb/Dithane, etc, to ensure both pre and post-infection activity. Fosphite should be applied at times of high disease risk, especially between the time that the conditions are conducive to Downy Mildew infection and the appearance of oil spots. Ensure spray coverage is adequate and that the appropriate rate of Fosphite is applied to match vine growth, particularly from mid-season onwards and especially when grapes are grown on root-stock.</td>
</tr>
<tr>
<td>Subterranean Clover</td>
<td>Phytophthora Clandestina</td>
<td>NSW, VIC, TAS, SA, WA, ONLY</td>
<td>Foliar Spray</td>
<td>3.5 - 5.2L/ha mid – late season, large canopies</td>
<td></td>
</tr>
</tbody>
</table>

**NOT TO BE USED FOR ANY PURPOSE, OR AN ANY MANNER, CPROPRIATE LEGISLATION.**

**WITHHOLDING PERIOD:**

Subterranean Clover: DO NOT graze or cut for stockfeed for 14 days after app
CITRUS, CURCURBITS, AVOCARDO, GRAPES, and PINEAPPLES: Not r
**Directions for use**

**Non Tree and Vine Crops**

<table>
<thead>
<tr>
<th>Crop</th>
<th>Disease</th>
<th>State</th>
<th>Method of application</th>
<th>Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cucurbits</td>
<td>Downy Mildew</td>
<td>ALL STATES</td>
<td>Foliar Spray</td>
<td>4L/ha in min 800 – 1000L of water</td>
<td>Use weekly spray intervals when conditions favour disease development.</td>
</tr>
<tr>
<td></td>
<td>Pseudoperonospora Cubensis</td>
<td></td>
<td></td>
<td></td>
<td>To avoid phytotoxicity with some plant species. It is recommended that the product be tested on a few plants of each species prior to the main application.</td>
</tr>
<tr>
<td>Ornamen-</td>
<td>Phytophthora Root &amp; Crown Rot</td>
<td>QLD, NSW, VIC, TAS, WA, NT and ACT</td>
<td>Foliar Spray</td>
<td>220ml/100L boom or knapsack</td>
<td>Apply at 4-6 weekly intervals when conditions favour disease development.</td>
</tr>
<tr>
<td>tals</td>
<td></td>
<td></td>
<td></td>
<td>430ml/100L air blast</td>
<td>To avoid phytotoxicity with some plant species. It is recommended that the product be tested on a few plants of each species prior to the main application.</td>
</tr>
<tr>
<td></td>
<td>Phytophthora sp.</td>
<td></td>
<td></td>
<td></td>
<td>DO NOT apply when ornamental plants are dormant or stressed.</td>
</tr>
<tr>
<td>Pineapple</td>
<td>Phytophthora Root &amp; Heart Rot</td>
<td>Qld, WA ONLY</td>
<td>Foliar Spray</td>
<td>5.2L/ha 1:200-1:500 water dilution</td>
<td>DO NOT apply to ornamental plants under extremes of temperature.</td>
</tr>
<tr>
<td></td>
<td>Phytophthora Cinnamomi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phytophthora Parasitica</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Restraints:** DO NOT apply Fosphite at rates that cause excessive run off.
MATERIAL SAFETY DATA SHEET

Date of Issue: 13 April 2011

Australian & New Zealand Distributor: JH Biotech Australasia Pty Ltd
PO BOX 6710 Baulkham Hills BC
N.S.W. Australia 2153
Phone: +61 (02) 8814 6245 Fax: +61 (02) 8814 6247

Manufacturer: JH BIOTECH, INC.
4951 Olivas Park Drive, Ventura, CA 93003
Phone: (805) 650-8933 Fax: (805) 650-8942

SECTION I: GENERAL INFORMATION
Product Number: 0623
Product Name: Fosphite EPA #68573-2
Chemical Name and Synonyms: Mixture of monopotassium phosphite and dipotassium phosphite
Precautions: Avoid contact with eyes, skin, and clothing

SECTION II: HAZARDOUS INGREDIENTS
Not Applicable

SECTION III: PHYSICAL/CHEMICAL DATA
Boiling Point: Over 100°C (212°F)
% Volatile by Weight: Not Applicable
Vapor Density: Estimated lighter than air

Vapor Pressure (mm Hg): Not Determined
Solubility In Water: Soluble
Specific Gravity (H₂O=1): 1.41
Appearance and Odor: Clear, colorless, odorless
pH: 6.5

HMIS: HEALTH 1  FLAMMABILITY 0  REACTIVITY 0

SECTION V: REACTIVITY DATA
Stability: Stable
Hazardous Polymerization: Will not occur
Hazardous Decomposition Products: Phosphorus oxides
Incompatibility: Strong oxidizers and water reactive materials

SECTION VI: HEALTH HAZARD DATA
Effects of Overexposure/Emergency and First Aid Procedures:
Eyes: Wear chemical type goggles. Avoid contact with eyes. Flush eyes immediately with water.
Skin: Protect skin from contact. Causes irritation. Wash off skin with water.
Inhalation: If vapors or mist causes irritation or distress, remove to fresh air.
Ingestion: If swallowed, do not induce vomiting, consult a physician immediately.
Respiratory Protection: No special requirements.

SECTION VII: SPILL, LEAK, AND DISPOSAL PROCEDURES
Contain all spills and leaks to prevent discharge into the environment. If spilled, use appropriate absorbent material to absorb the spilled material and flush spilled area with water.

SECTION VIII: SPECIAL PRECAUTIONS
Handling and Storage: Avoid overheating or freezing.
Other Precautions: Wash thoroughly after handling. If ingested, call a physician.

Neither this data sheet nor any statement contained herein grants or extends any license, expressed or implied, in connection with patents issued or pending which may be the property of the manufacturer or others. The information in this sheet has been assembled by the manufacturer based on its own studies and on the work of others. The manufacturer makes no warranties, expressed or implied, as to the accuracy, completeness, or adequacy of the information contained herein. The manufacturer shall not be liable to the vendee, the vendee’s employees, or anyone for any direct, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy, or furnishing of such information.
For use on outdoor and greenhouse food and non food crops, ornamental flowers, trees, shrubs and plants

ACTIVE INGREDIENTS: % By Wt.
Capsicum oleoresin extract* .................................................. 7.6%
Garlic oil ............................................................................ 23.4%
Soybean oil ......................................................................... 59.3%
OTHER INGREDIENTS ........................................................................................................... 9.7%
TOTAL 100.0%

*contains 0.26% nominal concentration of Capsaicin and related capsaicinoids

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID

If on skin or clothing
• Take off contaminated clothing.
• Rinse skin immediately with plenty of water for 15-20 minutes.
• Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
You may also contact 1-888-478-0798 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Wear chemical-resistant gloves. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:
• long-sleeved shirt and long pants
• shoes plus socks
• chemical resistant gloves

USER SAFETY RECOMMENDATIONS

Users should:
• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
• Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards: For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. Read all Directions for Use carefully before applying.

Produced For:
Gowan Company
P. O. Box 5569
Yuma, AZ 85366-5569

EPA Reg. No. 10163-326
EPA Est. No.
### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry into treated areas that is permitted under the Worker Protection Standard and involves contact with anything that has been treated such as plants, soil, or water, is:
- Coveralls
- Waterproof gloves
- Shoes plus socks

### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

### USE INFORMATION

Captiva® is a repellent and insecticide formulated using concentrated plant extracts that can be used alone as a repellent or in tank mixes with other biological or conventional insecticides or miticides to improve the level of control.

The repellent effect of Captiva® protects the crops from pests population establishment by its antifeedant and anti–egg laying properties. The irritant effect of Captiva® increases pest mobility, exposure and vulnerability to insecticides or miticides that act on contact. Captiva® weakens the cuticle of some immature stages of insect and mite pests.

Read all directions before using this product. Apply Captiva® directly to any food or non-food crop growing in field and greenhouses up to and including the day of harvest, at a maximum rate of 4 pints per acre. Refer to the *Insecticidal and Miticidal Uses Section* for a complete listing of crops.

### MIXING AND APPLICATION

**GROUND APPLICATIONS**: Captiva® has a repellent and irritant effect on adult and immature stages of soft bodied insects and mites.
- Apply with most types of ground spray equipment.
- This product must come into contact with the targeted pests to be effective. For best results coverage typically requires a minimum of 10 gallons of total spray volume per acre. Higher volumes will be required for larger perennial crops.
- For best preventive results, this product must be applied at least once a week on a regular and continuous basis.
- When pest pressure is heavy or plant canopy is dense, use higher rates and increase spray frequency. Repeat application if measurable rain occurs within two to three hours of spraying.

**AERIAL APPLICATIONS**

Apply Captiva® uniformly with properly calibrated equipment in 2 to 15 gallons of water per acre. Thoroughly clean equipment prior to mixing spray solution. Avoid streaking, skips, overlaps and spray drift during applications. Apply product only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Repeat application if rain occurs before the product is dry.

**MIXING**:
- Shake well before using. Add required amount of Captiva® to a clean spray tank with at least one-half of the water to be sprayed. Agitate the mixture thoroughly, add other products and then fill the tank with the remaining water and continue agitation.
- Always use this product promptly after mixing with water and do not let tank mix sit for more than 6 hours.
- Use water for dilution with a pH less than 8.
- Captiva® has been found to be compatible with most commonly used pesticides. To avoid problems, conduct a compatibility test before using this product in a tank mix with other pesticides. To test for compatibility, mix a small amount of each product, in the appropriate proportions, in a small jar.

**PHYTOTOXICITY**: Captiva® has been evaluated for phytotoxicity on a wide range of crops and ornamentals. However, since testing on all varieties of all crops and ornamentals is not feasible, testing a small portion of the area to be treated for phytotoxicity is recommended before treating the entire area. Further, all possible combinations or sequences of pesticide sprays, including other fertilizers, surfactants, adjuvants and other pesticides, have not been tested, thus testing for phytotoxicity of spray mixtures is recommended. It is further recommended that spray equipment used to apply Captiva® be thoroughly cleaned before use. The addition of spray adjuvants enhances control in some crops under ideal conditions. Addition of certain adjuvants may cause phytotoxicity therefore, the addition of crop oils and other adjuvants should be thoroughly tested before using. The addition of crop oils to spray mixtures is NOT recommended on ornamental crops. Captañ, Bordeaux mixtures, and highly alkaline products can cause unacceptable phytotoxicity and/or reduced effectiveness on target pests. Avoid tank mix combinations of Captiva® with compounds known to be incompatible with oil-based formulation to prevent phytotoxicity. "Waxy bloom" on certain crops and ornamental plants may be reduced after a Captiva® application.

**PREHARVEST INTERVAL**: Captiva® can be applied up to and including the day of harvest.
INSECTICIDAL AND MITICIDAL USES

Use this product as a foliar spray to repel and suppress pests. For best results use at lower rates when pest pressure is low or use as a preventative management tool in an integrated pest management system. When pest pressure is high use the product alone at its medium to high rates or tank mix with other contact insecticides or miticides.

RATES

Rates here indicated are for uses in agricultural and ornamental crops grown in the field or in greenhouses.

Stand-Alone:
- Dilute 1-2 pints of Captiva® per acre and apply by spraying every 4 -7 days, when used as a preventative management tool or in an integrated pest management system.
- When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mix, the most restrictive situations must apply.
- When pest pressure is heavier or canopy is dense, use higher rates and consider tank mixes with other insecticides or miticides.

Tank Mix:
- When tank mixed with other insecticides or miticides Captiva® will provide improved levels of control by increasing pest exposure to those products due to its irritant effect.
- Mix Captiva® at a rate of 8 ounces per acre with other chemical or biological insecticides or miticides. Follow the use directions of all products used in the tank mix including use directions and additive/adjuvant requirements or constraints.

GREENHOUSE AND ORNAMENTAL USES

Stand-Alone:
- Dilute 1 - 2 pints of Captiva® per 100 gallons of water and apply by spraying every 4 – 7 days when used as a preventative management tool or in an integrated pest management system.
- When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mix, the most restrictive situations must apply.
- When pest pressure is heavier, use higher rates and consider tank mixes with other insecticides or miticides.

Tank Mix:
- When tank mixed with other insecticides or miticides Captiva® will provide improved levels of control increasing pest exposure to those products due to its irritant effect.
- Mix Captiva® at a rate of 8 ounces per 100 gallons of water with other chemical or biological insecticides or miticides.
- When pest pressure is heavier, use higher rates.

TARGETED PESTS:

Use Captiva® in a foliar spray to repel or suppress soft bodied pests.
- Mites (such as Tetranychus spp., Oligonychus spp., Panonychus spp., Polyphagotarsonemus latus, Phyllocoptera oleivora, Brevipalpus phoenicis, Steneotarsonemus spinki)
- Thrips (such as Thrips spp., Frankliniella spp., Heliothrips spp., Scirtothrips citri.)
- Psyllids (such as Bactericera spp., Diaphorina citri, Cacopsylla spp.)
- Leafhoppers (such as Empoasca spp., Macrosteles spp., and Graphocephala spp.)
- Lepidoptera larvae (such as Spodoptera spp., Helicoverpa spp., Tuta absoluta, Thecla spp, Strymon basilides)
- White flies (such as Diaulurodes spp., Trialeurodes spp. Bemisia spp.)
- Other pests such as borers (Hypothenemus hampei), mealybugs (Planococcus spp., Pseudococcus spp., Dysmicoccus brevipes) and plant bugs (Leptoglossus spp., Nezara spp)

CROP GROUPS | USE SITES
---|---
**BERRIES** | Blackberry, Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Raspberry (black and red) (Note: For Strawberries – See Other.)
**BULB VEGETABLES** | Garlic, Leek, Onion (dry bu b, green and Welch), Shallot
**CEREAL GRAINS AND COMMODITIES** | Barley, Buckwheat, Corn, Millet (pearl and Proso), Oats, Popcorn, Rice, Rye, Sorghum (milo), Teosinte, Triticale, Wheat, Wild rice
**CHRISTMAS TREES AND CHRISTMAS TREE PLANTATIONS “Except California”** | Calamondin, Citrus citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sour and sweet), Pummelo, Satsuma mandarin, White Sapote, Uniq Fruit
**COTTON AND TOBACCO** | Chayote, Chinese waxgourd, Citron melon, Cucumber, Gherkin, Gourd (edible), Muskmelon, Pumpkin, Squash (summer and winter), Watermelon
**CUCURBIT VEGETABLES** | Alfalfa, Clover, Trefoil or Vetch.
<table>
<thead>
<tr>
<th>FRUITING VEGETABLES</th>
<th>Eggplant, Groundcherry, Papino, Pepper (including bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato</th>
</tr>
</thead>
<tbody>
<tr>
<td>HERBS AND SPICES GROUP</td>
<td>“Except California” Allspice, Angelica, Anise (anise seed and star), Annatto (seed), Balm (lemon balm), Basil, Borage, Burnet, Chamomile, Caper buds, Caraway, Caraway (black), Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese Chive, Cinnamon, Clary, Clove buds, Coriander (cilantro or Chinese parsley – leaf), Coriander (cilantro-seed), Costmary, Cilantro (leaf and seed), Cumin, Curry (leaf), Dill (Dillweed and seed), Fennel (common, Florence), Fenugreek, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood</td>
</tr>
<tr>
<td>LEGUME VEGETABLES</td>
<td>Bean, Broad Bean, Chickpea, Guar, Jackbean, Lablab bean, Lentil, Pea, Pigeon Pea, Soybean, Sword bean</td>
</tr>
<tr>
<td>BRASSICA (COLE) LEAFY VEGETABLES</td>
<td>Amaranth, Arugula, Broccoli, Broccoli raab (rapini), Brussels Sprouts, Cabbage, Cauliflower, Cardoon, Cavalo brocchi, Celery, Chinese Broccoli (gai lon), Chinese Cabbage (bok choy, Napa), Chinese mustard Cabbage (gai choy), Chinese Celery, Celtuce, Chervil, Chrysanthemum (edible-leaved, Garland), Collards, Corn salad, Cress (garden, upland), Dandelion, Dock (sorrel), Endive (escarole), Fennel (florencce), Kale, Kohlrabi, Lettuce (head and leaf), Mizuna, Mustard Greens, Mustard Spinach, Orach, Parsley, Purslane (garden, winter), Radicchio (red chicory), Rape Greens, Rhubarb, Spinach, Spinach (New Zealand, vine), Swiss Chard, Turnip Greens</td>
</tr>
<tr>
<td>OTHER</td>
<td>Asparagus, Avocado, Banana, Coffee, Cocoa, Cranberry, Fig, Globe artichoke, Grape, Hops, Kwiifruit, Mango, Mushroom, Okra, Olives, Papaya, Pawpaw, Peanut, Persimmon, Pineapple, Pomegranate, Strawberry, Tea, Water chestnut, Watercress, and all other food crops</td>
</tr>
<tr>
<td>POME FRUITS</td>
<td>Apple, Crabapple, Loquat, Mayhaw, Quince, Oriental Pear, or Pear</td>
</tr>
<tr>
<td>ROOT AND TUBER VEGETABLE</td>
<td>Arracacha, Arrowroot, Artichoke (Jerusalem, Chinese), Beet (garden, sugar), Burdock (ed ble), Canna (ed ble), Carrot, Cassava (bitter and sweet), Celeriac (celery root), Chayote (root), Chervil, (turnip-rooted), Chicory, Chufa, Dasheen (taro), Ginger, Ginseng, Horseradish, Leren, Oriental Radish (daikon), Parsley (turnip-rooted), Parsnip, Potato, Radish, Rutabaga, Salsify (oyster plant, black, Spanish), Skirret, Sweet potato, Tanier, Turmeric, Turnip, Yam bean (jicama, manioc pea), Yam (true)</td>
</tr>
<tr>
<td>STONE FRUIT</td>
<td>Apricots, Cherry (sweet and tart), Nectarine, Peach, Plum (Chickasaw, Damson, Japanese), Plumcot, Prune</td>
</tr>
<tr>
<td>TREE AND NUT</td>
<td>Almond, Beech nut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut, Hickory nut, Macadamia nut (bush nut), Pecan, Walnut (black and English), Pistachios</td>
</tr>
</tbody>
</table>

**GREENHOUSE**

<table>
<thead>
<tr>
<th>Use Sites</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREENHOUSE VEGETABLE PRODUCTION</td>
<td>Tomatoes, cucumbers, leaf and Bibb lettuces, bell peppers, eggplant, and herbs and grown vegetables in greenhouses.</td>
</tr>
<tr>
<td>TRANSPLANT VEGETABLE PRODUCTION</td>
<td>Brassicas such as broccoli and brussels sprouts, cucumbers, eggplants, melons, onion, peppers, squash are some of the most commonly grown vegetables for field transplant.</td>
</tr>
</tbody>
</table>

**ORNAMENTAL**

<table>
<thead>
<tr>
<th>Use Sites</th>
<th>Representative Commodities</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORNAMENTAL SHRUBS AND PLANTS</td>
<td>Amaranthus, Aster, Azalea, Ferns, Fuchsia, Caladium, Carnation, Chrysanthemum, Dahlia, Daisy, Lilies, Ivy, Ficus, Gardenia, Impatiens, Iris, Jasmine, Lilac, Marigold, Philodendron, Poinsettia, Rose, Zinnia</td>
</tr>
<tr>
<td>ORNAMENTAL TREES</td>
<td>Ash, Birch, Cedar, Cyprus, Dogwood, Fir, Elm, Juniper, Maple, Oak, Pine, Spruce</td>
</tr>
</tbody>
</table>
### Storage and Disposal

**Do not contaminate water, food, or feed by storage or disposal**

| **Pesticide Storage:** | Store in a cool, dry place away from heat or open flame. |
| **Pesticide Disposal:** | To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry). |
| **Container Handling:** | For plastic containers less than or equal to 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. |
| **FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK, OR FIRE), CALL CHEMTREC® (800) 424-9300.** | For other product information, contact Gowan Company, LLC or see Material Safety Data Sheet. |

**NOTICE OF CONDITIONS OF SALE AND WARRANTY AND LIABILITY LIMITATIONS**

**Important:** Read the entire Directions for Use and Notice of Conditions of Sale and Warranty and Liability Limitations before using this product. If terms are not acceptable return the unopened container for a full refund.

Our directions for use of this product are based on tests believed to be reliable. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, inadequate performance, or other unintended consequences may result due to soil or weather conditions, off target movement, presence of other materials, method of use or application, and other factors, all of which are beyond the control of Gowan Company. All such risks shall be assumed by the Buyer and User.

Gowan Company warrants that this product conforms to the specifications on the label when used in strict conformance with Direction for Use, subject to the above stated risk limitations. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, GOWAN COMPANY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISIENT WITH APPLICABLE LAW, GOWAN COMPANY'S EXCLUSIVE LIABILITY FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, OR ANY OTHER LEGAL THEORY IS STRICTLY LIMITED TO THE PURCHASE PRICE PAID OR REPLACEMENT OF PRODUCT, AT GOWAN COMPANY’S SOLE DISCRETION.

Captiva® is a registered trademark of Gowan Company, LLC.

Chemtrec® is a registered trademark of American Chemistry Council, Inc.

EcoFlora® Agro is a registered trademark of EcoFlora Agro S.A.S Corporation Colombia

(01-R0115)
1 Identification

- Product identifier
  - Trade name: Captiva®
    - EPA Registration No.: 10163-326
  - CAS Number:
    - Active Ingredient: Capsicum oleoresin extract* (7.6%), CAS: 8023-77-6
    - Garlic oil (23.4%), CAS: 8000-78-0
    - Soybean oil (59.3%), CAS: 8001-22-7
  - * Contains 0.26% nominal concentration of Capsaicin and related capsaicinoids

- Relevant identified uses of the substance or mixture and uses advised against
  - Sector of Use
    - For use on outdoor and greenhouse food and non food crops, ornamental flowers, trees, shrubs and plants
  - Application of the substance / the mixture
    - Insect repellent / Insecticide

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    - Gowan Company
    - P.O. Box 5569
    - Yuma, Arizona 85366-5569
    - (928) 788-8844
  - Information department: sds@gowanco.com
  - Emergency telephone number:
    - Chemtrec® Emergency Telephone 24 - Hours: (Spills, leak or fire) Inside U.S. & Canada: (800) 424-9300
    - Outside the U.S. & Canada: +011 (703) 527-3887
  - For medical emergency (Prosar®): (888) 478-0798

2 Hazard(s) identification

- Classification of the substance or mixture
  - GHS07
  - Skin Sens. 1B H317 May cause an allergic skin reaction.

- Label elements
  - GHS label elements
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
    - Hazard pictograms
  - GHS07

- Signal word: Warning
- Hazard statements
  - May cause an allergic skin reaction.
- Precautionary statements
  - Avoid breathing dust/fume/gas/mist/vapors/spray
  - Wear protective gloves.
  - Specific treatment (see on this label).
  - Wash contaminated clothing before reuse.
  - If skin irritation or rash occurs: Get medical advice/attention.

(Contd. on page 2)
Safety Data Sheet
acc. to OSHA

Trade name: Captiva®
EPA Registration No.: 10163-326

Dispose of contents/container in accordance with local/regional/national/international regulations.

- Hazard description:
  Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Wear chemical-resistant gloves. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

- Classification system:
- NFPA ratings (scale 0 - 4)
  ![NFPA Rating]
  Heat = 1  
  Fire = 0  
  Reactivity = 0  

HAZARD INDEX:
4 Severe Hazard
3 Serious Hazard
2 Moderate Hazard
1 Slight Hazard
0 Minimal Hazard

- HMIS-ratings (scale 0 - 4)
  ![HMIS Rating]
  Health = 1  
  Fire = 0  
  Reactivity = 0  

HAZARD INDEX:
4 Severe Hazard
3 Serious Hazard
2 Moderate Hazard
1 Slight Hazard
0 Minimal Hazard

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable in US.
    - vPvB: Not applicable in US.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.
- Dangerous components: Void

4 First-aid measures

- Description of first aid measures
  - General information:
  Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

You may also contact 1-888-478-0798 for emergency medical treatment information.
5 Fire-fighting measures

· Extinguishing media
  · Suitable extinguishing agents:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  · Special hazards arising from the substance or mixture: No further relevant information available.

· Advice for firefighters
  · Protective equipment: Wear self-contained respirator protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:
  For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

· Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

· Handling:
  · Precautions for safe handling
    Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Wear chemical-resistant gloves. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.
  · Information about protection against explosions and fires: Keep ignition sources away - Do not smoke.

· Conditions for safe storage, including any incompatibilities
  · Storage:
    · Requirements to be met by storerooms and receptacles:
      Store in a cool, dry place away from heat or open flame.
    · Information about storage in one common storage facility: Store away from foodstuffs.
    · Further information about storage conditions: None.
  · Specific end use(s) No further relevant information available.
8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters
  - Components with limit values that require monitoring at the workplace:
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures:
      ● Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
      ● Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
    - Breathing equipment: Not required.
    - Protection of hands:
      - Material of gloves: Chemical-resistant gloves.
      - Penetration time of glove material:
        The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    - Body protection:
      Applicators and other handlers must wear:
      ● long-sleeved shirt and long pants
      ● shoes plus socks
      ● chemical resistant gloves

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Color: Brownish
    - Odor: Garlic
    - Odour threshold: Not determined.

- pH-value at 20 °C (68 °F):
  3.7

- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: Undetermined.

- Flash point:
  Not applicable.

- Flammability (solid, gaseous):
  Not applicable.
Trade name: Captiva®
EPA Registration No.: 10163-326

(Contd. of page 4)

· Ignition temperature: Not determined.
  · Decomposition temperature: Not determined.
· Auto igniting: Product is not self-igniting.
· Danger of explosion: Product does not present an explosion hazard.
  · Explosion limits: Not determined.
    · Lower: Not determined.
    · Upper: Not determined.
· Vapor pressure: Not determined.
  · Density at 20 °C (68 °F): 0.945 g/cm³ (7.886 lbs/gal)
  · Relative density: Not determined.
  · Vapour density: Not determined.
  · Evaporation rate: Not determined.
· Solubility in / Miscibility with Water: Dispersible.
· Partition coefficient (n-octanol/water): Not determined.
· Viscosity: Not determined.
  · Dynamic: Not determined.
  · Kinematic: Not determined.
· Other information No further relevant information available.

10 Stability and reactivity

· Reactivity
  · Chemical stability Stable under normal conditions
  · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
· Possibility of hazardous reactions No dangerous reactions known.
· Conditions to avoid Excessive heat.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· Information on toxicological effects
  · Acute toxicity:
    · LD/LC50 values that are relevant for classification:
      Oral LD50 >5000 mg/kg (rat)
      Dermal LD50 >2000 mg/kg (rat)
      Inhalative LC50/4 h >2.07 mg/l (rat)
· Primary irritant effect:
  · on the skin: Moderately Irritating
  · on the eye: Minimal
· Sensitization: No sensitizing effects known.

(Contd. on page 6)
Additional toxicological information:

- Carcinogenic categories

  - IARC (International Agency for Research on Cancer)
    None of the ingredients are listed.

  - NTP (National Toxicology Program)
    None of the ingredients are listed.

  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients are listed.

12 Ecological information

- Toxicity
  For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment washwaters or rinsate.
  - Aquatic toxicity: No further relevant information available.

- Persistence and degradability
  All ingredients are natural, biodegradable 100% and non – polluting.

- Behavior in environmental systems:
  - Bioaccumulative potential No further relevant information available.
  - Mobility in soil No further relevant information available.

- Additional ecological information:
  - General notes: Generally not hazardous for water

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

- Uncleaned packagings:
  - Recommendation:
    For plastic containers less than or equal to 5 gallons: Nonrefillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.
**14 Transport information**

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>・ UN-Number</td>
<td>DOT, ADR, ADN, IMDG, IATA</td>
</tr>
<tr>
<td>・ UN proper shipping name</td>
<td>ADR, ADN, IMDG, IATA</td>
</tr>
<tr>
<td>・ Transport hazard class(es)</td>
<td>ADR, ADN, IMDG, IATA</td>
</tr>
<tr>
<td>・ Packing group</td>
<td>ADR, IMDG, IATA</td>
</tr>
<tr>
<td>・ Environmental hazards:</td>
<td></td>
</tr>
<tr>
<td>・ Marine pollutant:</td>
<td>No</td>
</tr>
<tr>
<td>・ Special precautions for user</td>
<td>Not applicable</td>
</tr>
<tr>
<td>・ Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable</td>
</tr>
<tr>
<td>・ UN &quot;Model Regulation&quot;:</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

**15 Regulatory information**

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>・ Safety, health and environmental regulations/legislation specific for the substance or mixture</td>
<td></td>
</tr>
<tr>
<td>EPA /FIFRA Information:</td>
<td></td>
</tr>
<tr>
<td>This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.</td>
<td></td>
</tr>
<tr>
<td>・ SARA Title III</td>
<td></td>
</tr>
<tr>
<td>・ Section 355 (extremely hazardous substances):</td>
<td></td>
</tr>
<tr>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
<tr>
<td>・ Section 313 (Specific toxic chemical listings):</td>
<td></td>
</tr>
<tr>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
<tr>
<td>・ TSCA (Toxic Substances Control Act):</td>
<td></td>
</tr>
<tr>
<td>All ingredients are listed.</td>
<td></td>
</tr>
<tr>
<td>・ Proposition 65</td>
<td></td>
</tr>
<tr>
<td>・ Chemicals known to cause cancer:</td>
<td></td>
</tr>
<tr>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
<tr>
<td>・ Chemicals known to cause reproductive toxicity for females:</td>
<td></td>
</tr>
<tr>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
<tr>
<td>・ Chemicals known to cause reproductive toxicity for males:</td>
<td></td>
</tr>
<tr>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
<tr>
<td>・ Chemicals known to cause developmental toxicity:</td>
<td></td>
</tr>
<tr>
<td>None of the ingredients are listed.</td>
<td></td>
</tr>
</tbody>
</table>

(Contd. on page 8)
Carcinogenicity categories

- **EPA (Environmental Protection Agency)**
  None of the ingredients are listed.

- **TLV (Threshold Limit Value established by ACGIH)**
  None of the ingredients are listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients are listed.

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**
  Not applicable

- **Signal word**: (USA EPA) CAUTION

- **Hazard statements**
  Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Wear chemical- resistant gloves. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

- **Precautionary statements**
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wear protective gloves.
  Specific treatment (see on this label).
  Wash contaminated clothing before reuse.
  If skin irritation or rash occurs: Get medical advice/attention.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS**: Supply Chain
- **Contact**: sds@gowanco.com
- **Date of preparation / last revision**: 07/10/2015 / 2
- **Abbreviations and acronyms**:
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - DOT: US Department of Transportation
  - IATA: International Air Transport Association
  - ACGIH: American Conference of Governmental Industrial Hygienists
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)
Trade name: Captiva®
EPA Registration No.: 10163-326

LC50  Lethal concentration, 50 percent
LD50  Lethal dose, 50 percent
Skin Sens. 1B  Sensitisation - Skin, Hazard Category 1B

* Sources Captiva® is a registered trademark of Gowan Company, L.L.C.
* Data compared to the previous version altered.
Captiva Prime Insect Repellent/Insecticide

Gowan Co.
Brenda Stewart
PO Box 5569
Yuma, AZ 85366 USA

Allowed with Restrictions

NOP: Biopesticides

11-Nov-2016

For use as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.

Crop Pest, Weed, and Disease Control

01-Dec-2017

Peggy Mians

Executive Director

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the current OMRI Standards Manual®. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Products List™ at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator’s responsibility to properly use the product, including following any restrictions.
MATERIAL SAFETY DATA SHEET

IDENTITY AS IT APPEARS ON LABEL: Flying Skull Plant Products NUKE EM

SECTION I – CONTACT INFORMATION

Manufacturer’s Name: Flying Skull Plant Products  
Emergency Telephone: 503.256.2400
Address: 9220 SE Stark Street  
Information: 503.256.2400
Portland, Oregon 97216  
Date Prepared: 10.20.11

SECTION II – HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Hazardous Components (Specific Chemical Identity): None  
Common Name: None

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 212°  
Specific Gravity: 1.05
Vapor Pressure: Same as water  
Melting Point: 30°F
Vapor Density: Same as water  
Evaporation Rate: Same as water
Solubility in water: Complete  
Appearance/Odor: Yellow orange/Non-Obnoxious

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A  
Extinguish Media: N/A
Special Fire Procedures: None  
Fire/Explosion Hazards: None
Flammable Limit: N/A  
LEL &UEL: N/A

SECTION V – REACTIVITY DATA

Unstable Stable XXX  
Conditions to avoid: >130°F/pH<3 5/pH>9 5
Incompatibility/Materials to avoid: Caustics, acids, strong bases
Hazardous Polymerization: May Occur Will Not Occur XXX  
Conditions to avoid: N/A

SECTION VI – HEALTH HAZARD

Inhalation: None  
Eye: Mild Irritant  
Skin: Mild Irritant  
Ingestion: None <5g body weight
Health Hazards: None Known  
Carcinogenicity: None  
NTP: N/A  
IAEC Monographs: N/A
OSHA Regulated: No  
Signs/Symptoms of Exposure: None  
Emergency First Aid Procedures: N/A
Medical Conditions Generally Aggravated by Exposure: None Known

SECTION VII – PRECAUTIONS FOR SAFE HANDLING / USE

Material Released/Spilled: Avoid slipping, wash down with water  
Waste Disposal: Flush down any waste system  
Storage: Store at room temperature
Other Precautions: In case of eye or skin contact, flush with water. If irritation persists, contact physician.

SECTION VIII – Control Measures

Respiratory Protection: Not required  
Work/Hygienic Practices: Normal-Good
Special Ventilation: Not required  
Protective Gloves: Rubber gloves recommended
Eye Protection: Safety goggles recommended  
Other Protection: N/A
Product
Flying Skull Nuke em® Insecticide & Fungicide for Organic Gardening Concentrated

Company
Flying Skull Plant Products
Gordon Redman
9220 SE Stark St
Portland, OR 97216

Status
Allowed with Restrictions

Category
NOP: Fermentation Products – pesticides

Issue date
16-Aug-2013

Product number
sku-4344

Class
Crop Pest, Weed, and Disease Control

Expiration date
01-Sep-2017

Restrictions
For use as a pest lure, repellent, or as part of a trap, or as a disease control. May be used for other pesticidal purposes if the requirements of 205.206(e) are met, which requires the use of preventative, mechanical, physical, and other pest, weed, and disease management practices.

Product review is conducted according to the policies in the current OMRI Policy Manual® and based on the standards in the current OMRI Standards Manual™. To verify the current status of this or any OMRI Listed product, view the most current version of the OMRI Products List™ at OMRI.org. OMRI listing is not equivalent to organic certification and is not a product endorsement. It cannot be construed as such. Final decisions on the acceptability of a product for use in a certified organic system are the responsibility of a USDA accredited certification agent. It is the operator’s responsibility to properly use the product, including following any restrictions.
I. LOW STRESS TECHNIQUES FOR PRUNING
# GTI Grower-Processor Facility: Equipment Sanitization Log

<table>
<thead>
<tr>
<th>Name of Equipment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Label:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Serial number:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Manufacturer:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date:</th>
<th>Sanitization Description</th>
<th>Sanitization performed by:</th>
<th>Date of validation before put into service:</th>
<th>Validation performed by:</th>
<th>Next sanitization planned on (date):</th>
<th>Remarks:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Attachment B: Organizational Documents

Instructions:
- Attach certified copies of the applicant’s certificate of incorporation, partnership agreement, charter or other such documentation. If the applicant is not organized in Pennsylvania, attach certified copies of documentation that show that the applicant is authorized to do business in Pennsylvania.
- Complete this cover sheet. Scan this sheet and the organizational documents and save it as a PDF file called “Attachment B,” using the appropriate file name format.

<table>
<thead>
<tr>
<th>Business Name, as it appears on the applicant’s certificate of incorporation, charter, bylaws, partnership agreement or other legal business formation documents:</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTI Pennsylvania, LLC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trade names and DBA (doing business as) names:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Principal Business Address: 325 W Huron Street, Suite 230</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>City: Chicago</th>
<th>State: Illinois</th>
<th>Zip Code: 60654</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax: N/A</th>
<th>Email:</th>
</tr>
</thead>
</table>
WE ASSIGNED YOU AN EMPLOYER IDENTIFICATION NUMBER

Thank you for applying for an Employer Identification Number (EIN). We assigned you EIN [redacted]. This EIN will identify you, your business accounts, tax returns, and documents, even if you have no employees. Please keep this notice in your permanent records.

When filing tax documents, payments, and related correspondence, it is very important that you use your EIN and complete name and address exactly as shown above. Any variation may cause a delay in processing, result in incorrect information in your account, or even cause you to be assigned more than one EIN. If the information is not correct as shown above, please make the correction using the attached tear off stub and return it to us.

A limited liability company (LLC) may file Form 8832, Entity Classification Election, and elect to be classified as an association taxable as a corporation. If the LLC is eligible to be treated as a corporation that meets certain tests and it will be electing S corporation status, it must timely file Form 2553, Election by a Small Business Corporation. The LLC will be treated as a corporation as of the effective date of the S corporation election and does not need to file Form 8832.

To obtain tax forms and publications, including those referenced in this notice, visit our Web site at www.irs.gov. If you do not have access to the Internet, call 1-800-829-3676 (TTY/TDD 1-800-829-4059) or visit your local IRS office.

IMPORTANT REMINDERS:

* Keep a copy of this notice in your permanent records. This notice is issued only one time and the IRS will not be able to generate a duplicate copy for you. You may give a copy of this document to anyone asking for proof of your EIN.

* Use this EIN and your name exactly as they appear at the top of this notice on all your federal tax forms.

* Refer to this EIN on your tax-related correspondence and documents.

If you have questions about your EIN, you can call us at the phone number or write to us at the address shown at the top of this notice. If you write, please tear off the stub at the bottom of this notice and send it along with your letter. If you do not need to write us, do not complete and return the stub.

Your name control associated with this EIN is GTIP. You will need to provide this information, along with your EIN, if you file your returns electronically.

Thank you for your cooperation.
Keep this part for your records. CP 575 G (Rev. 7-2007)

Return this part with any correspondence so we may identify your account. Please correct any errors in your name or address.

Your Telephone Number (   ) - Best Time to Call ________________  ________________

DATE OF THIS NOTICE: 09-08-2016

EMPLOYER IDENTIFICATION NUMBER: ________________

FORM: SS-4

NOBOD

INTERNAL REVENUE SERVICE
CINCINNATI OH 45999-0023

GTI PENNSYLVANIA LLC
325 W HURON ST STE 230
CHICAGO, IL 60654
PENNSYLVANIA DEPARTMENT OF STATE
BUROUHE OF CORPORATIONS AND CHARITABLE ORGANIZATIONS

Certificate of Organization
Domestic Limited Liability Company

CT - COUNTER
10142171. SODA4

Read all instructions prior to completing. This form may be submitted online.

Fee: $125

In compliance with the requirements of 15 Pa.C.S. § 8913 (relating to certificate of organization), the undersigned desiring to organize a limited liability company, hereby certifies that:

1. The name of the limited liability company (designator is required, i.e., "company", "limited" or "limited liability company" or abbreviation):
   GTI Pennsylvania, LLC

2. The (a) address of the limited liability company's initial registered office in this Commonwealth or (b) name of its commercial registered office provider and the county of venue is:
   (Complete (a) or (b) - not both)
   (a) Number and Street     City     State     Zip     County
   4431 N. Front St., 3rd Floor, Harrisburg, PA 17110 Dauphin
   (b) Name of Commercial Registered Office Provider
   (Name)
   (County)

3. The name and address, including street and number, if any, of each organizer is (all organizers must sign on page 2):
   Name
   Address

2016 AUG 30  PM 4:45
PA. DEPT. OF STATE

2016 SEP  2  PM 1:37
PA. DEPT. OF STATE
4. Strike out if inapplicable term
   - A member's interest in the company is to be evidenced by a certificate of membership interest.

5. Strike out if inapplicable:
   Management of the company is vested in a manager or managers.

6. The specified effective date, if any is:
   ________________
   (MM/DD/YYYY and hour, if any)

7. Strike out if inapplicable:
   The company is a restricted professional company organized to render the following restricted professional service(s)
   __________________________
   __________________________
   __________________________

8. For additional provisions of the certificate, if any, attach an 8½ x 11 sheet.

IN TESTIMONY WHEREOF, the organizer(s) has (have) signed this Certificate of Organization this

30th day of August 2016

________________________
Signature

________________________
Signature
Operating Agreement of

This Operating Agreement (the "Agreement") of [Company name] (the "Company"), effective as of February 21, 2017 (the "Effective Date"), is entered into by the Company and [Member name], a limited liability company, as the member of the Company (the "Member").

WHEREAS, the Company was formed as a limited liability company by the filing of a certificate of organization (the "Certificate of Organization") with the Department of State of the Commonwealth of Pennsylvania ("Department of State") pursuant to and in accordance with the Pennsylvania Limited Liability Company Law of 1994 (15 Pa. C.S.A. §§ 8901 et seq.), as amended from time to time (the "LLCL"); and

WHEREAS, the Member and the Company agree that the membership units in and management of the Company shall be governed by the terms set forth herein.

NOW, THEREFORE, the Member and the Company agree as follows:

1. Name. The name of the Company is [Company name].

2. Purpose. The purpose of the Company is to engage in any lawful act or activity for which limited liability companies may be formed under the LLCL and to engage in any and all activities necessary or incidental thereto.

3. Powers. The Company shall have all the powers necessary or convenient to carry out the purposes for which it is organized, including the powers granted by the LLCL.

4. Registered Office. The registered office of the Company in the Commonwealth of Pennsylvania shall be the location or commercial registered office provider set forth in the Certificate of Organization. If the registered office or commercial registered office provider shall change, the Member shall promptly amend the Certificate of Organization or file a statement of change with the Department of State, in the manner provided by the LLCL.

5. Members.
   a. Initial Member. The Member owns [number] out of [total number] of the membership units of the Company. The name and the business, residence, or mailing address of the Member are as follows:

      Name | Address
      ---- | ----
      [Name] | [Address]

   b. Additional Members. One or more additional members may be admitted to the Company with the consent of the Member. Before the admission of any such additional members to the Company, the Member shall amend this Agreement to make such changes as the Member shall determine to reflect the fact that the Company shall have such additional members. Each
additional member shall execute and deliver a supplement or counterpart to this Agreement, as necessary.


   a. Authority; Powers and Duties of the Member. The Member shall have exclusive and complete authority and discretion to manage the operations and affairs of the Company and to make all decisions regarding the business of the Company. Any action taken by the Member shall constitute the act of and serve to bind the Company. Persons dealing with the Company are entitled to rely conclusively on the power and authority of the Member as set forth in this Agreement. The Member shall have all rights and powers of a manager under the LLCL, and shall have such authority, rights, and powers in the management of the Company to do any and all other acts and things necessary, proper, convenient, or advisable to effectuate the purposes of this Agreement.

   b. Election of Officers; Delegation of Authority. The Member may, from time to time, designate one or more officers with such titles as may be designated by the Member to act in the name of the Company with such authority as may be delegated to such officers by the Member (each such designated person, an "Officer"). Any such Officer shall act pursuant to such delegated authority until such Officer is removed by the Member. Any action taken by an Officer designated by the Member pursuant to authority delegated to such Officer shall constitute the act of and serve to bind the Company. Persons dealing with the Company are entitled to rely conclusively on the power and authority of any Officer set forth in this Agreement and any instrument designating such Officer and the authority delegated to him or her.

7. Liability of Member; Indemnification.

   a. Liability of Member. Except as otherwise required by the LLCL, the debts, obligations, and liabilities of the Company, whether arising in contract, tort or otherwise, shall be solely the debts, obligations, and liabilities of the Company, and the Member shall not be personally liable for any such debt, obligation, or liability of the Company solely by reason of being or acting as a member of the Company or participating in the management of the Company.

   b. Indemnification. To the fullest extent permitted under the LLCL, the Member (irrespective of the capacity in which it acts) shall be entitled to indemnification and advancement of expenses from the Company for and against any loss, damage, claim, or expense (including attorneys' fees) whatsoever incurred by the Member relating to or arising out of any act or omission or alleged acts or omissions (whether or not constituting negligence or gross negligence) performed or omitted by the Member on behalf of the Company; provided, however, that any indemnity under this Section 7(b) shall be provided out of and to the extent of Company assets only, and neither the Member nor any other person shall have any personal liability on account thereof.

8. Term. In accordance with the Certificate of Organization, the term of the Company shall be perpetual unless the Company is dissolved and terminated in accordance with Section 12.

9. Capital Contributions. The Member hereby agrees to contribute to the Company such cash, property, or services as determined by the Member.
10. **Tax Status; Income and Deductions.**

   a. **Tax Status.** As long as the Company has only one member, it is the intention of the Company and the Member that the Company be treated as a disregarded entity for federal and all relevant state tax purposes and neither the Company nor the Member shall take any action or make any election which is inconsistent with such tax treatment. All provisions of this Agreement are to be construed so as to preserve the Company's tax status as a disregarded entity.

   b. **Income and Deductions.** All items of income, gain, loss, deduction, and credit of the Company (including, without limitation, items not subject to federal or state income tax) shall be treated for federal and all relevant state income tax purposes as items of income, gain, loss, deduction, and credit of the Member.

11. **Distributions.** Distributions shall be made to the Member at the times and in the amounts determined by the Member.

12. **Dissolution; Liquidation.**

   a. The Company shall dissolve, and its affairs shall be wound up upon the first to occur of the following: (i) the written consent of the Member or (ii) any other event or circumstance giving rise to the dissolution of the Company under Subchapter I of the LLCL, unless the Company's existence is continued pursuant to the LLCL.

   b. Upon dissolution of the Company, the Company shall immediately commence to wind up its affairs and the Member shall promptly liquidate the business of the Company. During the period of the winding up of the affairs of the Company, the rights and obligations of the Member under this Agreement shall continue.

   c. In the event of dissolution, the Company shall conduct only such activities as are necessary to wind up its affairs (including the sale of the assets of the Company in an orderly manner), and the assets of the Company shall be applied as follows: (i) first, to creditors, to the extent otherwise permitted by law, in satisfaction of liabilities of the Company (whether by payment or the making of reasonable provision for payment thereof); and (ii) second, to the Member.

   d. Upon the completion of the winding up of the Company, the Member shall file a certificate of dissolution in accordance with the LLCL.

13. **Miscellaneous.**

   a. Amendments to this Agreement may be made only with the consent of the Member.

   b. This Agreement shall be governed by the laws of the Commonwealth of Pennsylvania.

   c. If any provision of this Agreement shall be declared to be invalid, illegal, or unenforceable, such provision shall survive to the extent it is not so declared, and the validity, legality, and enforceability of the other provisions hereof shall not in any way be affected or impaired thereby, unless such action would substantially impair the benefits to any party of the remaining provisions of this Agreement.

   [Signatures on Following Page]
IN WITNESS WHEREOF, the undersigned have executed this Agreement to be effective as of the date first written above.
LIMITED LIABILITY COMPANY AGREEMENT

This Limited Liability Company Agreement of [redacted], a Delaware limited liability company (the "Company"), is entered into as of February 21, 2017 by and among the Company and each individual identified as a Member on Schedule A to this Agreement (each a "Member").

RECITALS

WHEREAS, the Company was formed under the laws of the State of [redacted] by the filing of a Certificate with the Secretary of State of the State of [redacted] on February 21, 2017 (the "Certificate") for the purposes set forth in Section 2.05 of this Agreement; and

WHEREAS, the Members wish to enter into this Agreement setting forth the terms and conditions governing the operation and management of the Company.

NOW, THEREFORE, in consideration of the mutual covenants and agreements hereinafter set forth and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

ARTICLE I
DEFINITIONS

Section 1.01 Definitions. Capitalized terms used herein and not otherwise defined shall have the meanings set forth in this Section 1.01:

"Additional Capital Contribution" has the meaning set forth in Section 3.02(a).

"Adjusted Capital Account Deficit" means, with respect to any Member, the deficit balance, if any, in such Member’s Capital Account as of the end of the relevant Fiscal Year, after giving effect to the following adjustments:

(a) crediting to such Capital Account any amount that such Member is obligated to restore or is deemed to be obligated to restore pursuant to Treasury Regulations Sections 1.704-1(b)(2)(ii)(c), 1.704-2(g)(1) and 1.704-2(i); and

(b) debiting to such Capital Account the items described in Treasury Regulations Section 1.704-1(b)(2)(ii)(d)(4), (5) and (6).

"Affiliate" means, with respect to any Person, any other Person who, directly or indirectly (including through one or more intermediaries), controls, is controlled by, or is under common control with, such Person. For purposes of this definition, "control," when used with respect to any specified Person, shall mean the power, direct or indirect, to direct or cause the direction of the management and policies of such Person, whether through ownership of voting securities or partnership or other ownership interests, by contract or otherwise; and the terms "controlling" and "controlled" shall have correlative meanings.

"Agreement" means this Limited Liability Company Agreement, as executed and as it may be amended, modified, supplemented or restated from time to time, as provided herein.
"Applicable Law" means all applicable provisions of (a) constitutions, treaties, statutes, laws (including the common law), rules, regulations, decrees, ordinances, codes, proclamations, declarations or orders of any Governmental Authority; (b) any consents or approvals of any Governmental Authority; and (c) any orders, decisions, advisory or interpretative opinions, injunctions, judgments, awards, decrees of, or agreements with, any Governmental Authority.

"Bankruptcy" means, with respect to a Member, the occurrence of any of the following: (a) the filing of an application by such Member for, or a consent to, the appointment of a trustee of such Member's assets; (b) the filing by such Member of a voluntary petition in bankruptcy or the filing of a pleading in any court of record admitting in writing such Member's inability to pay its debts as they come due; (c) the making by such Member of a general assignment for the benefit of such Member's creditors; (d) the filing by such Member of an answer admitting the material allegations of, or such Member's consenting to, or defaulting in answering a bankruptcy petition filed against such Member in any bankruptcy proceeding; or (e) the expiration of sixty (60) days following the entry of an order, judgment or decree by any court of competent jurisdiction adjudicating such Member a bankrupt or appointing a trustee of such Member's assets.

"Book Depreciation" means, with respect to any Company asset for each Fiscal Year, the Company's depreciation, amortization, or other cost recovery deductions determined for federal income tax purposes, except that if the Book Value of an asset differs from its adjusted tax basis at the beginning of such Fiscal Year, Book Depreciation shall be an amount which bears the same ratio to such beginning Book Value as the federal income tax depreciation, amortization, or other cost recovery deduction for such Fiscal Year bears to such beginning adjusted tax basis; provided, that if the adjusted basis for federal income tax purposes of an asset at the beginning of such Fiscal Year is zero and the Book Value of the asset is positive, Book Depreciation shall be determined with reference to such beginning Book Value using any permitted method selected by the Managing Members in accordance with Treasury Regulations Section 1.704-1(b)(2)(iv)(g)(3).

"Book Value" means, with respect to any Company asset, the adjusted basis of such asset for federal income tax purposes, except as follows:

(a) the initial Book Value of any Company asset contributed by a Member to the Company shall be the gross Fair Market Value of such Company asset as of the date of such contribution;

(b) immediately prior to the distribution by the Company of any Company asset to a Member, the Book Value of such asset shall be adjusted to its gross Fair Market Value as of the date of such distribution;

(c) the Book Value of all Company assets shall be adjusted to equal their respective gross Fair Market Values, as reasonably determined by the Members, as of the following times:

(i) the acquisition of an additional Membership Interest in the Company by a new or existing Member in consideration for more than a de minimis Capital Contribution;

(ii) the distribution by the Company to a Member of more than a de minimis amount of property (other than cash) as consideration for all or a part of such Member's Membership Interest in the Company; and
(iii) the liquidation of the Company within the meaning of Treasury Regulations Section 1.704-1(b)(2)(ii)(g);

(d) provided, that adjustments pursuant to clauses (i) and (ii) above need not be made if the Managing Members reasonably determines that such adjustment is not necessary or appropriate to reflect the relative economic interests of the Members and that the absence of such adjustment does not adversely and disproportionately affect any Member;

(e) the Book Value of each Company asset shall be increased or decreased, as the case may be, to reflect any adjustments to the adjusted tax basis of such Company asset pursuant to Code Section 734(b) or Code Section 743(b), but only to the extent that such adjustments are taken into account in determining Capital Account balances pursuant to Treasury Regulations Section 1.704-1(b)(2)(iv)(m); provided, that Book Values shall not be adjusted pursuant to this paragraph (d) to the extent that an adjustment pursuant to paragraph (c) above is made in conjunction with a transaction that would otherwise result in an adjustment pursuant to this paragraph (d); and

(f) if the Book Value of a Company asset has been determined pursuant to paragraph (a) or adjusted pursuant to paragraphs (c) or (d) above, such Book Value shall thereafter be adjusted to reflect the Book Depreciation taken into account with respect to such Company asset for purposes of computing Net Income and Net Losses.

"Business" has the meaning set forth in Section 2.05(a).

"Business Day" means a day other than a Saturday, Sunday or other day on which commercial banks in the City of New York are authorized or required to close.

"Capital Account" has the meaning set forth in Section 3.03.

"Capital Contribution" means, for any Member, the total amount of cash and cash equivalents and the Book Value of any property contributed to the Company by such Member.

"Certificate of Formation" has the meaning set forth in the Recitals.


"Company" has the meaning set forth in the Preamble.

"Company Interest Rate" has the meaning set forth in Section 6.02(c).

"Company Minimum Gain" means "partnership minimum gain" as defined in Treasury Regulations Section 1.704-2(b)(2), substituting the term "Company" for the term "partnership" as the context requires.

"Confidential Information" has the meaning set forth in Section 12.03(a).

"Contributing Member" has the meaning set forth in Section 3.02(b).

"Covered Person" has the meaning set forth in Section 8.01(a).

"Cram-Down Contribution" has the meaning set forth in Section 3.02(c).
"Default Amount" has the meaning set forth in Section 3.02(b).

"Default Loan" has the meaning set forth in Section 3.02(b).

"Default Rate" has the meaning set forth in Section 3.02(b).

"Electronic Transmission" means any form of communication not directly involving the physical transmission of paper that creates a record that may be retained, retrieved and reviewed by a recipient thereof and that may be directly reproduced in paper form by such a recipient through an automated process.

"Fair Market Value" of any asset as of any date means the purchase price that a willing buyer having all relevant knowledge would pay a willing seller for such asset in an arm's length transaction, as determined jointly by the Members.

"Fiscal Year" means the calendar year, unless the Company is required to have a taxable year other than the calendar year, in which case Fiscal Year shall be the period that conforms to its taxable year.

"GAAP" means United States generally accepted accounting principles in effect from time to time.

"Governmental Authority" means any federal, state, local or foreign government or political subdivision thereof, or any agency or instrumentality of such government or political subdivision, or any self-regulated organization or other non-governmental regulatory authority or quasi-governmental authority (to the extent that the rules, regulations or orders of such organization or authority have the force of law), or any arbitrator, court or tribunal of competent jurisdiction.

"Joinder Agreement" means a joinder agreement.

"Liquidator" has the meaning set forth in Section 11.03(a).

"Losses" has the meaning set forth in Section 8.03(a).

"Managing Members" mean, initially, Peter Kadens and Benjamin Kovler.

"Member" means each Person who is hereafter admitted as a Member in accordance with the terms of this Agreement and the Delaware Act. The Members shall constitute the "members" (as that term is defined in the Delaware Act) of the Company.

"Member Nonrecourse Debt" means "partner nonrecourse debt" as defined in Treasury Regulations Section 1.704-2(b)(4), substituting the term "Company" for the term "partnership" and the term "Member" for the term "partner" as the context requires.

"Member Nonrecourse Debt Minimum Gain" means an amount, with respect to each Member Nonrecourse Debt, equal to the Company Minimum Gain that would result if the Member Nonrecourse Debt were treated as a Nonrecourse Liability, determined in accordance with Treasury Regulations Section 1.704-2(i)(3).
"Member Nonrecourse Deduction" means "partner nonrecourse deduction" as defined in Treasury Regulations Section 1.704-2(i), substituting the term "Member" for the term "partner" as the context requires.

"Membership Interest" means an interest in the Company owned by a Member, including such Member's right (a) to its distributive share of Net Income, Net Losses and other items of income, gain, loss and deduction of the Company; (b) to its distributive share of the assets of the Company; (c) to vote, consent to or otherwise participate in any decision of the Members as provided in this Agreement; and (d) to any and all other benefits to which such Member may be entitled as provided in this Agreement or the Delaware Act. The Membership Interest of each Member shall be expressed as a percentage interest and shall be as set forth on Schedule A.

"Net Income" and "Net Loss" mean, for each Fiscal Year or other period specified in this Agreement, an amount equal to the Company's taxable income or taxable loss, or particular items thereof, determined in accordance with Code Section 703(a) (where, for this purpose, all items of income, gain, loss or deduction required to be stated separately pursuant to Code Section 703(a)(1) shall be included in taxable income or taxable loss), but with the following adjustments:

(a) any income realized by the Company that is exempt from federal income taxation, as described in Code Section 705(a)(1)(B), shall be added to such taxable income or taxable loss, notwithstanding that such income is not includable in gross income;

(b) any expenditures of the Company described in Code Section 705(a)(2)(B), including any items treated under Treasury Regulations Section 1.704-1(b)(2)(iv)(I) as items described in Code Section 705(a)(2)(B), shall be subtracted from such taxable income or taxable loss, notwithstanding that such expenditures are not deductible for federal income tax purposes;

(c) any gain or loss resulting from any disposition of Company property with respect to which gain or loss is recognized for federal income tax purposes shall be computed by reference to the Book Value of the property so disposed, notwithstanding that the adjusted tax basis of such property differs from its Book Value;

(d) any items of depreciation, amortization and other cost recovery deductions with respect to Company property having a Book Value that differs from its adjusted tax basis shall be computed by reference to the property's Book Value (as adjusted for Book Depreciation) in accordance with Treasury Regulations Section 1.704-1(b)(2)(iv)(g);

(e) if the Book Value of any Company property is adjusted as provided in the definition of Book Value, then the amount of such adjustment shall be treated as an item of gain or loss and included in the computation of such taxable income or taxable loss; and

(f) to the extent an adjustment to the adjusted tax basis of any Company property pursuant to Code Sections 732(d), 734(b) or 743(b) is required, pursuant to Treasury Regulations Section 1.704 1(b)(2)(iv)(m), to be taken into account in determining Capital Accounts, the amount of such adjustment to the Capital Accounts shall be treated as an item of gain (if the adjustment increases the basis of the asset) or loss (if the adjustment decreases such basis).

"Non-Contributing Member" has the meaning set forth in Section 3.02(b).

"Non-Managing Members" means at any time the Members that are not the Managing Members.
"Nonrecourse Deductions" has the meaning set forth in Treasury Regulations Section 1.704-2(b).

"Nonrecourse Liability" has the meaning set forth in Treasury Regulations Section 1.704-2(b)(3).

"Officers" has the meaning set forth in Section 7.03.

"Permitted Transfer" means a Transfer of Membership Interests carried out pursuant to Section 9.02. "Permitted Transferee" means a recipient of a Permitted Transfer.

"Person" means an individual, corporation, partnership, joint venture, limited liability company, Governmental Authority, unincorporated organization, trust, association or other entity.

"Regulatory Allocations" has the meaning set forth in Section 5.02(e).

"Related Party Agreement" means any agreement, arrangement or understanding between the Company and any Member or any Affiliate of a Member or any officer or employee of the Company, as such agreement may be amended, modified, supplemented or restated in accordance with the terms of this Agreement.

"Representative" means, with respect to any Person, any and all directors, officers, employees, consultants, financial advisors, counsel, accountants and other agents of such Person.

"Securities Act" means the Securities Act of 1933, as amended, or any successor federal statute, and the rules and regulations thereunder, which shall be in effect at the time.

"Subsidiary" means, with respect to any Person, any other Person of which a majority of the outstanding shares or other equity interests having the power to vote for directors or comparable managers are owned, directly or indirectly, by the first Person.

"Taxing Authority" has the meaning set forth in Section 6.02(b).

"Transfer" means to, directly or indirectly, sell, transfer, assign, pledge, encumber, hypothecate or similarly dispose of, either voluntarily or involuntarily, by operation of law or otherwise, or to enter into any contract, option or other arrangement or understanding with respect to the sale, transfer, assignment, pledge, encumbrance, hypothecation or similar disposition of, any Membership Interests owned by a Person or any interest (including a beneficial interest) in any Membership Interests owned by a Person. "Transferor" and "Transferee" mean a Person who makes or receives a Transfer, respectively.

"Treasury Regulations" means the final or temporary regulations issued by the United States Department of Treasury pursuant to its authority under the Code, and any successor regulations.

"Withholding Advances" has the meaning set forth in Section 6.02(b).

ARTICLE II
ORGANIZATION

Section 2.01  Formation.
(a) The Company was formed on February 21, 2017, pursuant to the provisions of the [Act], upon the filing of the [Certificate of Formation] with the Secretary of State of the State of [State].

(b) This Agreement shall constitute the "limited liability company agreement" (as that term is used in the [Act]) of the Company. The rights, powers, duties, obligations and liabilities of the Members shall be determined pursuant to the [Act] and this Agreement. To the extent that the rights, powers, duties, obligations and liabilities of any Member are different by reason of any provision of this Agreement than they would be under the [Act] in the absence of such provision, this Agreement shall, to the extent permitted by the [Act], control.

Section 2.02 Name. The name of the Company is "[Name or Designation]" or such other name or names as may be designated by the Managing Members; provided, that the name shall always contain the words "Limited Liability Company" or the abbreviation "L.L.C." or the designation "LLC." The Managing Members shall give prompt notice to the Members of any change to the name of the Company.

Section 2.03 Principal Office. The principal office of the Company is located at such place as may from time to time be determined by the Managing Members. The Managing Members shall give prompt notice of any such change to each of the Members.

Section 2.04 Registered Office; Registered Agent.

(a) The registered office of the Company shall be the office of the initial registered agent named in the Certificate of Formation or such other office (which need not be a place of business of the Company) as the Managing Members may designate from time to time in the manner provided by the [Act] and Applicable Law.

(b) The registered agent for service of process on the Company in the State of Delaware shall be the initial registered agent named in the Certificate of Formation or such other Person or Persons as the Managing Members may designate from time to time in the manner provided by the [Act] and Applicable Law.

Section 2.05 Purpose; Powers.

(a) The purposes of the Company are to engage in (i) investment and ownership of cannabis-related businesses that may apply for, or have been awarded, cultivation, distribution, processing, or dispensary licenses in states that have legalized either medical or adult use marijuana in such state (the "Business") and (ii) any and all activities necessary or incidental thereto.

(b) The Company shall have all the powers necessary or convenient to carry out the purposes for which it is formed, including the powers granted by the [Act].

Section 2.06 Term. The term of the Company commenced on the date the Certificate of Formation was filed with the Secretary of State of the State of [State] and shall continue in existence perpetually until the Company is dissolved in accordance with the provisions of this Agreement.

ARTICLE III
CAPITAL CONTRIBUTIONS; CAPITAL ACCOUNTS
Section 3.01 Initial Capital Contributions. Contemporaneously with the execution of this Agreement, each Member has made an initial Capital Contribution and is deemed to own Membership Interests in the amounts set forth opposite such Member's name on Schedule A attached hereto. The Managing Members shall update Schedule A upon the issuance or Transfer of any Membership Interests to any new or existing Member in accordance with this Agreement.

Section 3.02 Additional Capital Contributions.

(a) In addition to the Initial Capital Contributions of the Members, the Members shall make additional Capital Contributions in cash, in proportion to their respective Membership Interests, as determined by the Managing Members from time to time to be reasonably necessary to pay any operating, capital or other expenses relating to the Business (such additional Capital Contributions, the "Additional Capital Contributions"). Upon the Managing Members making such determination for Additional Capital Contributions, the Managing Members shall deliver to the Non-Managing Members a written notice of the Company's need for Additional Capital Contributions, which notice shall specify in reasonable detail (i) the purpose for such Additional Capital Contributions, (ii) the aggregate amount of such Additional Capital Contributions, (iii) each Member's share of such aggregate amount of Additional Capital Contributions based upon each such Member's Membership Interest, and (iv) the date (which date shall not be less than thirty (30) Business Days from the date that such notice is given) on which such Additional Capital Contributions shall be required to be made by the Members.

(b) If any Member shall fail to timely make, or notifies the other Member that it shall not make, all or any portion of any Additional Capital Contribution which such Member is obligated to make under Section 3.02(a), then such Member shall be deemed to be a "Non-Contributing Member". The non-defaulting Member (the "Contributing Member") shall be entitled, but not obligated, to loan to the Non-Contributing Member, by contributing to the Company on its behalf, all or any part of the amount (the "Default Amount") that the Non-Contributing Member failed to contribute to the Company (each such loan, a "Default Loan"), provided, that such Contributing Member shall have contributed to the Company its pro rata share of the applicable Additional Capital Contribution. Such Default Loan shall be treated as an Additional Capital Contribution by the Non-Contributing Member. Each Default Loan shall bear interest (compounded monthly on the first day of each calendar month) on the unpaid principal amount thereof from time to time remaining from the date advanced until repaid, at the lesser of (i) ten percent (10%) per annum or (ii) the maximum rate permitted at law (the "Default Rate"). Each Default Loan shall be recourse solely to the Non-Contributing Member's Membership Interest. Default Loans shall be repaid out of the distributions that would otherwise be made to the Non-Contributing Member under ARTICLE VI or ARTICLE XII, as more fully provided for in Section 3.02(d). So long as a Default Loan is outstanding, the Non-Contributing Member shall have the right to repay the Default Loan (and interest then due and owing) in whole or in part. Upon the repayment in full of all Default Loans (but not upon their conversion as provided in Section 3.02(c)) made in respect of a Non-Contributing Member (and so long as the Non-Contributing Member is not otherwise a Non-Contributing Member), such Non-Contributing Member shall cease to be a Non-Contributing Member.

(c) At any time after the date six (6) months after a Default Loan is made, at the option of the Contributing Member, (i) such Default Loan shall be converted into an Additional Capital Contribution of the Contributing Member in an amount equal to the principal and unpaid interest on such Default Loan pursuant to this Section 3.02(c), (ii) the Non-Contributing Member shall be deemed to have received a distribution, pursuant to ARTICLE VI, of an amount equal to the principal and unpaid interest on such Default Loan, (iii) such distribution shall be deemed
paid to the Contributing Member in repayment of the Default Loan, (iv) such amount shall be
deemed contributed by the Contributing Member as an Additional Capital Contribution (a
"Cram-Down Contribution"), and (v) the Contributing Member's Capital Account shall be
increased by, and the Non-Contributing Member's Capital Account shall be decreased by, an
amount equal to the principal and unpaid interest on such Default Loan. A Cram-Down
Contribution shall be deemed an Additional Capital Contribution by the Contributing Member
making (or deemed making) such Cram-Down Contribution as of the date such Cram-Down
Contribution is made or the date on which such Default Loan is converted to a Cram-Down
Contribution. At the time of a Cram-Down Contribution, the Membership Interest of the
Contributing Member shall be increased proportionally by the amount of such contribution,
thereby diluting the Membership Interest of the Non-Contributing Member. Once a Cram-Down
Contribution has been made (or deemed made), no subsequent payment or tender in respect of the
Cram-Down Contribution shall affect the Membership Interests of the Members, as adjusted in
accordance with this Section 3.02(c).

(d) Notwithstanding any other provisions of this Agreement, any amount that
otherwise would be paid or distributed to a Non-Contributing Member pursuant to ARTICLE VI
shall not be paid to the Non-Contributing Member but shall be deemed paid and applied on behalf
of such Non-Contributing Member (i) first, to accrued and unpaid interest on all Default Loans
(in the order of their original maturity date), (ii) second to the principal amount of such Default
Loans (in the order of their original maturity date) and (iii) third, to any Additional Capital
Contribution of such Non-Contributing Member that has not been paid and is not deemed to have
been paid.

(e) Notwithstanding the foregoing, if a Non-Contributing Member fails to make its
Additional Capital Contribution in accordance with Section 3.02(a), the Contributing Member
may:

(i) institute proceedings against the Non-Contributing Member to obtain
payment of its portion of the Additional Capital Contributions, together with interest
thereon at the Default Rate from the date that such Additional Capital Contribution was
due until the date that such Additional Capital Contribution is made, at the cost and
expense of the Non-Contributing Member; or

(ii) elect to dissolve and liquidate the Company pursuant to ARTICLE XII; or

(iii) purchase the Membership Interest of the Non-Contributing Member at a
price equal to ninety (90%) of the lesser of (i) the price paid by the Non-Contributing
Member for its Membership Interest and (ii) the Fair Market Value of its Membership
Interest.

(f) Except as set forth in this Section 3.02, neither Member shall be required to make
additional Capital Contributions or make loans to the Company.

Section 3.03 Maintenance of Capital Accounts. The Company shall establish and maintain
for each Member a separate capital account (a "Capital Account") on its books and records in accordance
with this Section 3.03. Each Capital Account shall be established and maintained in accordance with the
following provisions:

(a) Each Member's Capital Account shall be increased by the amount of:
(i) such Member's Capital Contributions, including such Member's initial Capital Contribution and any Additional Capital Contributions;

(ii) any Net Income or other item of income or gain allocated to such Member pursuant to ARTICLE V; and

(iii) any liabilities of the Company that are assumed by such Member or secured by any property distributed to such Member.

(b) Each Member's Capital Account shall be decreased by:

(i) the cash amount or Book Value of any property distributed to such Member pursuant to ARTICLE VI and Section 11.03(c);

(ii) the amount of any Net Loss or other item of loss or deduction allocated to such Member pursuant to ARTICLE V; and

(iii) the amount of any liabilities of such Member assumed by the Company or that are secured by any property contributed by such Member to the Company.

Section 3.04 Succession Upon Transfer. In the event that any Membership Interests are Transferred in accordance with the terms of this Agreement, the Transferee shall succeed to the Capital Account of the Transferor to the extent it relates to the Transferred Membership Interests and, subject to Section 5.04, shall receive allocations and distributions pursuant to ARTICLE V, ARTICLE VI and ARTICLE XI in respect of such Membership Interests.

Section 3.05 Negative Capital Accounts. In the event that any Member shall have a deficit balance in its Capital Account, such Member shall have no obligation, during the term of the Company or upon dissolution or liquidation thereof, to restore such negative balance or make any Capital Contributions to the Company by reason thereof, except as may be required by Applicable Law or in respect of any negative balance resulting from a withdrawal of capital or dissolution in contravention of this Agreement.

Section 3.06 No Withdrawals From Capital Accounts. No Member shall be entitled to withdraw any part of its Capital Account or to receive any distribution from the Company, except as otherwise provided in this Agreement. No Member, including the Managing Members, shall receive any interest, salary or drawing with respect to its Capital Contributions or its Capital Account, except as otherwise provided in this Agreement. The Capital Accounts are maintained for the sole purpose of allocating items of income, gain, loss and deduction among the Members and shall have no effect on the amount of any distributions to any Members, in liquidation or otherwise.

Section 3.07 Treatment of Loans From Members. Loans by any Member to the Company shall not be considered Capital Contributions and shall not affect the maintenance of such Member's Capital Account, other than to the extent provided in Section 3.02(c) and Section 3.03(a)(iii), if applicable.

ARTICLE IV MEMBERS

Section 4.01 Admission of New Members.
(a) New Members may be admitted from time to time (i) in connection with the issuance of Membership Interests by the Company, subject to compliance with the provisions of Section 7.02(d), and (ii) in connection with a Transfer of Membership Interests, subject to compliance with the provisions of ARTICLE IX, and in either case, following compliance with the provisions of Section 4.01(b).

(b) In order for any Person not already a Member of the Company to be admitted as a Member, whether pursuant to an issuance or Transfer of Membership Interests, such Person shall have (i) executed and delivered to the Company a written undertaking substantially in the form of the Joinder Agreement, and (ii) provided all such information, including background checks, fingerprints and other personal and financial information as required for the Company to continue to conduct the Business pursuant to the state laws that the Company or its subsidiaries operate in. Upon the amendment of Schedule A of the Agreement by the Managing Members and the satisfaction of any other applicable conditions, including the receipt by the Company of payment for the issuance of Membership Interests, such Person shall be admitted as a Member and deemed listed as such on the books and records of the Company. The Managing Members shall also adjust the Capital Accounts of the Members as necessary in accordance with Section 3.03.

Section 4.02  No Personal Liability. Except as otherwise provided in the Delaware Act, by Applicable Law or expressly in this Agreement, no Member will be obligated personally for any debt, obligation or liability of the Company or other Members, whether arising in contract, tort or otherwise, solely by reason of being a Member.

Section 4.03  No Withdrawal. So long as a Member continues to hold any Membership Interests, such Member shall not have the ability to withdraw or resign as a Member prior to the dissolution and winding up of the Company and any such withdrawal or resignation or attempted withdrawal or resignation by a Member prior to the dissolution or winding up of the Company shall be null and void. As soon as any Person who is a Member ceases to hold any Membership Interests, such Person shall no longer be a Member. Such Member shall cooperate in good faith with any regulatory filings to reflect the amended ownership of the Company, as necessary to operate the Business. A Member shall not cease to be a Member as a result of the Bankruptcy of such Member or as a result of any other events specified in of the Act.

Section 4.04  No Interest in Company Property. No real or personal property of the Company shall be deemed to be owned by any Member individually, but shall be owned by, and title shall be vested solely in, the Company. Without limiting the foregoing, each Member hereby irrevocably waives during the term of the Company any right that such Member may have to maintain any action for partition with respect to the property of the Company.

ARTICLE V
ALLOCATIONS

Section 5.01 Allocation of Net Income and Net Loss. For each Fiscal Year (or portion thereof), after giving effect to the special allocations set forth in Section 5.02, Net Income and Net Loss of the Company shall be allocated among the Members pro rata in accordance with their Membership Interests.

Section 5.02 Regulatory and Special Allocations. Notwithstanding the provisions of Section 5.01:
(a) If there is a net decrease in Company Minimum Gain (determined according to Treasury Regulations Section 1.704-2(d)(1)) during any Fiscal Year, each Member shall be specially allocated Net Income for such Fiscal Year (and, if necessary, subsequent Fiscal Years) in an amount equal to such Member's share of the net decrease in Company Minimum Gain, determined in accordance with Treasury Regulations Section 1.704-2(g). The items to be so allocated shall be determined in accordance with Treasury Regulations Sections 1.704-2(f)(6) and 1.704-2(j)(2). This Section 5.02 is intended to comply with the "minimum gain chargeback" requirement in Treasury Regulations Section 1.704-2(f) and shall be interpreted consistently therewith.

(b) Member Nonrecourse Deductions shall be allocated in the manner required by Treasury Regulations Section 1.704-2(i). Except as otherwise provided in Treasury Regulations Section 1.704-2(i)(4), if there is a net decrease in Member Nonrecourse Debt Minimum Gain during any Fiscal Year, each Member that has a share of such Member Nonrecourse Debt Minimum Gain shall be specially allocated Net Income for such Fiscal Year (and, if necessary, subsequent Fiscal Years) in an amount equal to that Member's share of the net decrease in Member Nonrecourse Debt Minimum Gain. Items to be allocated pursuant to this paragraph shall be determined in accordance with Treasury Regulations Sections 1.704-2(i)(4) and 1.704-2(j)(2). This Section 5.02(b) is intended to comply with the "minimum gain chargeback" requirements in Treasury Regulations Section 1.704-2(i)(4) and shall be interpreted consistently therewith.

(c) Nonrecourse Deductions shall be allocated to the Members in accordance with their Membership Interests.

(d) In the event any Member unexpectedly receives any adjustments, allocations or distributions described in Treasury Regulations Section 1.704-1(b)(2)(ii)(d)(4), (5) or (6), Net Income shall be specially allocated to such Member in an amount and manner sufficient to eliminate the Adjusted Capital Account Deficit created by such adjustments, allocations or distributions as quickly as possible. This Section 5.02(d) is intended to comply with the qualified income offset requirement in Treasury Regulations Section 1.704-1(b)(2)(ii)(d) and shall be interpreted consistently therewith.

(e) The allocations set forth in paragraphs (a), (b), (c) and (d) above (the "Regulatory Allocations") are intended to comply with certain requirements of the Treasury Regulations under Code Section 704. Notwithstanding any other provisions of this ARTICLE V (other than the Regulatory Allocations), the Regulatory Allocations shall be taken into account in allocating Net Income and Net Losses among Members so that, to the extent possible, the net amount of such allocations of Net Income and Net Losses and other items and the Regulatory Allocations to each Member shall be equal to the net amount that would have been allocated to such Member if the Regulatory Allocations had not occurred.

Section 5.03 Tax Allocations.

(a) Subject to Section 5.03(b), Section 5.03(c) and Section 5.03(d), all income, gains, losses and deductions of the Company shall be allocated, for federal, state and local income tax purposes, among the Members in accordance with the allocation of such income, gains, losses and deductions pursuant to Section 5.01 and Section 5.02, except that if any such allocation for tax purposes is not permitted by the Code or other Applicable Law, the Company's subsequent income, gains, losses and deductions shall be allocated among the Members for tax purposes, to the extent permitted by the Code and other Applicable Law, so as to reflect as nearly as possible the allocation set forth in Section 5.01 and Section 5.02.
(b) Items of Company taxable income, gain, loss and deduction with respect to any property contributed to the capital of the Company shall be allocated among the Members in accordance with Code Section 704(c) and the traditional method with curative allocations of Treasury Regulations Section 1.704-3(c), so as to take account of any variation between the adjusted basis of such property to the Company for federal income tax purposes and its Book Value.

(c) If the Book Value of any Company asset is adjusted pursuant to Treasury Regulations Section 1.704-1(b)(2)(iv)(f) as provided in clause (c) of the definition of Book Value, subsequent allocations of items of taxable income, gain, loss and deduction with respect to such asset shall take account of any variation between the adjusted basis of such asset for federal income tax purposes and its Book Value in the same manner as under Code Section 704(c).

(d) Allocations of tax credit, tax credit recapture and any items related thereto shall be allocated to the Members according to their interests in such items as determined by the Managing Members taking into account the principles of Treasury Regulations Section 1.704-1(b)(4)(i).

(e) Allocations pursuant to this Section 5.03 are solely for purposes of federal, state and local taxes and shall not affect, or in any way be taken into account in computing, any Member's Capital Account or share of Net Income, Net Losses, distributions or other items pursuant to any provisions of this Agreement.

Section 5.04 Allocations in Respect of Transferred Membership Interests. In the event of a Transfer of Membership Interests during any Fiscal Year made in compliance with the provisions of ARTICLE IX, Net Income, Net Losses and other items of income, gain, loss and deduction of the Company attributable to such Membership Interests for such Fiscal Year shall be determined using the interim closing of the books method.

ARTICLE VI DISTRIBUTIONS

Section 6.01 Distributions of Cash Flow and Capital Proceeds.

(a) Any available cash of the Company, after allowance for all reasonable costs and expenses incurred by the Company and for such reasonable reserves as determined in the sole discretion of the Managing Members, shall be distributed to the Members, in accordance with their respective Membership Interests.

(b) If a Member has (i) an unpaid Additional Capital Contribution that is overdue and/or (ii) an outstanding Default Loan due to another Member, any amount that otherwise would be distributed to such Member pursuant to Section 6.01(a) or ARTICLE XII (up to the amount of such Additional Capital Contribution or outstanding Default Loan, together with interest accrued thereon) shall not be paid to such Member but shall be deemed distributed to such Member and applied on behalf of such Member pursuant to Section 3.02(d).

(c) Notwithstanding any provision to the contrary contained in this Agreement, the Company shall not make any distribution to Members if such distribution would violate § 18-607 of the Delaware Act or other Applicable Law.
Section 6.02 Tax Withholding; Withholding Advances.

(a) Tax Withholding. If requested by the Managing Members, each Member shall, if able to do so, deliver to the Managing Members:

(i) an affidavit in form satisfactory to the Managing Members that the applicable Member (or its members, as the case may be) is not subject to withholding under the provisions of any federal, state, local, foreign or other Applicable Law;

(ii) any certificate that the Managing Members may reasonably request with respect to any such laws; and/or

(iii) any other form or instrument reasonably requested by the Managing Members relating to any Member's status under such law.

If a Member fails or is unable to deliver to the Managing Members the affidavit described in Section 6.02(a)(i), the Managing Members may withhold amounts from such Member in accordance with Section 6.02(b).

(b) Withholding Advances. The Company is hereby authorized at all times to make payments ("Withholding Advances") with respect to each Member in amounts required to discharge any obligation of the Company to withhold or make payments to any federal, state, local or foreign taxing authority (a "Taxing Authority") with respect to any distribution or allocation by the Company of income or gain to such Member and to withhold the same from distributions to such Member. Any funds withheld from a distribution by reason of this Section 6.02(b) shall nonetheless be deemed distributed to the Member in question for all purposes under this Agreement.

(c) Repayment of Withholding Advances. Any Withholding Advance made by the Company to a Taxing Authority on behalf of a Member and not simultaneously withheld from a distribution to that Member shall, with interest thereon accruing from the date of payment at a rate equal to the prime rate published in the Wall Street Journal on the date of payment plus two percent (2.0%) per annum (the "Company Interest Rate"):

(i) be promptly repaid to the Company by the Member on whose behalf the Withholding Advance was made (which repayment by the Member shall not constitute a Capital Contribution, but shall credit the Member's Capital Account if the Managing Members shall have initially charged the amount of the Withholding Advance to the Capital Account); or

(ii) with the consent of the Managing Members, be repaid by reducing the amount of the next succeeding distribution or distributions to be made to such Member (which reduction amount shall be deemed to have been distributed to the Member, but which shall not further reduce the Member's Capital Account if the Managing Members shall have initially charged the amount of the Withholding Advance to the Capital Account).

Interest shall cease to accrue from the time the Member on whose behalf the Withholding Advance was made repays such Withholding Advance (and all accrued interest) by either method of repayment described above.
Indemnification. Each Member hereby agrees to indemnify and hold harmless the Company and the other Members from and against any liability with respect to taxes, interest or penalties that may be asserted by reason of the Company's failure to deduct and withhold tax on amounts distributable or allocable to such Member. The provisions of this Section 6.02(d) and the obligations of a Member pursuant to Section 6.02(c) shall survive the termination, dissolution, liquidation and winding up of the Company and the withdrawal of such Member from the Company or Transfer of its Membership Interests. The Company may pursue and enforce all rights and remedies it may have against each Member under this Section 6.02, including bringing a lawsuit to collect repayment with interest of any Withholding Advances.

Section 6.03 Distributions in Kind.

(a) The Managing Members are hereby authorized, as it may reasonably determine, to make distributions to the Members in the form of securities or other property held by the Company. In any non-cash distribution, the securities or property so distributed will be distributed among the Members in the same proportion and priority as cash equal to the Fair Market Value of such securities or property would be distributed among the Members pursuant to Section 6.01.

(b) Any distribution of securities shall be subject to such conditions and restrictions as the Managing Members determine are required or advisable to ensure compliance with Applicable Law. In furtherance of the foregoing, the Managing Members may require that the Members execute and deliver such documents as the Managing Members may deem necessary or appropriate to ensure compliance with all federal and state securities laws that apply to such distribution and any further Transfer of the distributed securities, and may appropriately legend the certificates that represent such securities to reflect any restriction on Transfer with respect to such laws.

ARTICLE VII
MANAGEMENT

Section 7.01 Management of the Company. The business and affairs of the Company shall be managed by the Managing Members. Subject to the provisions of Section 7.02, the Managing Members shall have full and complete discretion to manage and control the business and affairs of the Company, to make all decisions affecting the business and affairs of the Company and to take all such actions as it deems necessary or appropriate to accomplish the purposes of the Company set forth in Section 2.05. The actions of the Managing Members taken in accordance with the provisions of this Agreement shall bind the Company. No other Member of the Company shall have any authority or right to act on behalf of or bind the Company, unless otherwise provided herein or unless specifically authorized by the Managing Members pursuant to a resolution expressly authorizing such action which resolution is duly adopted by the Managing Members. Notwithstanding anything to the contrary contained in this Agreement, in the event that there is more than one Managing Members and such Managing Members disagree with regard to an action or decision involving the Company, the affirmative vote of Members holding a majority in interest of the Membership Units in the Company shall have the authority to take such approved action or decision on behalf of the Company.

Section 7.02 Actions Requiring Approval of Members. Without the written approval of Members holding at least 75% of the Membership Units in the Company, the Company shall not, and shall not enter into any commitment to:
(a) Amend, modify or waive the Certificate of Formation or this Agreement; provided that the Managing Members may, without the consent of the other Member, amend Schedule A following any new issuance, redemption, repurchase or Transfer of Membership Interests in accordance with this Agreement;

(b) Make any material change to the nature of the Business conducted by the Company or enter into any business other than the Business;

(c) Issue additional Membership Interests or admit additional Members to the Company.

(d) Incur any indebtedness, pledge or grant liens on any assets or guarantee, assume, endorse or otherwise become responsible for the obligations of any other Person;

(e) Make any loan, advance or capital contribution in any Person;

(f) Enter into, amend in any material respect, waive or terminate any Related Party Agreement other than the entry into a Related Party Agreement that is on an arm's length basis and on terms no less favorable to the Company than those that could be obtained from an unaffiliated third party;

(g) Enter into or effect any transaction or series of related transactions involving the purchase, lease, license, exchange or other acquisition (including by merger, consolidation, acquisition of stock or acquisition of assets) by the Company of any assets and/or equity interests of any Person, other than in the ordinary course of business consistent with past practice;

(h) Enter into or effect any transaction or series of related transactions involving the sale, lease, license, exchange or other disposition (including by merger, consolidation, sale of stock or sale of assets) by the Company of any assets, other than sales of inventory in the ordinary course of business consistent with past practice;

(i) Dissolve, wind-up or liquidate the Company or initiate a bankruptcy proceeding involving the Company.

Section 7.03 Officers The Managing Members may appoint individuals as officers of the Company (the "Officers") as it deems necessary or desirable to carry on the business of the Company and the Managing Members may delegate to such Officers such power and authority as the Managing Members deem advisable. No Officer need be a Member of the Company. Any individual may hold two or more offices of the Company. Each Officer shall hold office until his successor is designated by the Managing Members or until his earlier death, resignation or removal. Any Officer may resign at any time upon written notice to the Managing Members. Any Officer may be removed by the Managing Members with or without cause at any time. A vacancy in any office occurring because of death, resignation, removal or otherwise, may, but need not, be filled by the Managing Members.

Section 7.04 Action Without Meeting. Any matter that is to be voted on, consented to or approved by Members may be taken without a meeting, without prior notice and without a vote if consented to, in writing or by Electronic Transmission, by a Member or Members having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all members entitled to vote thereon were present and voted. A record shall be maintained by the Managing Members of each such action taken by written consent of a Member or Members.
Section 7.05 Informational Rights. In addition to the information required to be provided pursuant to ARTICLE X, the Managing Members shall keep the other Members reasonably informed on a timely basis of any material fact, information, litigation, employee relations or other matter that could reasonably be expected to have a material impact on the operations or financial position of the Company, including, but not limited to, any modification of any loan or other financing to the Company. The Managing Members shall provide all material information relating to the Company or the management or operation of the Company as any Member may reasonable request from time to time.

Section 7.06 Other Activities; Business Opportunities.

(a) Nothing contained in this Agreement shall prevent any Member, including the Managing Members, or any of their Affiliates from engaging in any other activities or businesses, regardless of whether those activities or businesses are similar to or competitive with the Business. None of the Members nor any of their Affiliates shall be obligated to account to the Company or to the other Member for any profits or income earned or derived from other such activities or businesses.

Section 7.07 Compensation and Reimbursement of Members. The Managing Members shall not be compensated for its services as the Managing Members. The Company shall reimburse the Members for all ordinary, necessary and direct expenses incurred by the Managing Members on behalf of the Company in carrying out the Company's business activities, including, without limitation, salaries of officers and employees of the Managing Members who are carrying out the Company's business activities.

Section 7.08 Removal of a Managing Members. The Members holding 80% the Membership Interest may remove a Managing Members by delivering written notice to a Managing Members, upon either (a) a Bankruptcy of the Managing Members or (b) a breach of any material covenant, duty or obligation under this Agreement by the Managing Members that remains uncured for ten (10) days after written notice of such breach was received by the Managing Members. Upon a Managing Member's removal, the Members holding a majority of the Membership Interest shall appoint a new Managing Members. The removal of a Managing Members shall not affect their rights as a Member and shall not constitute a withdrawal of such Member.

Section 7.09 Resignation of Managing Members. A Managing Members may voluntarily resign as a Managing Members for any reason, upon ninety (90) days written notice to the other Members. Upon such resignation, the Members holding a majority of the Membership Interest may appoint another Person to serve as a Managing Members. The resignation of a Managing Members shall not affect its rights as a Member and shall not constitute a withdrawal of a Member.

ARTICLE VIII
EXCULPATION AND INDEMNIFICATION

Section 8.01 Exculpation of Covered Persons.

(a) Covered Persons. As used herein, the term "Covered Person" shall mean (i) each Member, including the Managing Members; (ii) each officer, director, stockholder, partner, member, Affiliate, employee, agent or representative of each Member, and each of their Affiliates; and (iii) each Officer, employee, agent or representative of the Company.
(b) **Standard of Care.** No Covered Person shall be liable to the Company or any other Covered Person for any loss, damage or claim incurred by reason of any action taken or omitted to be taken by such Covered Person in good faith reliance on the provisions of this Agreement, so long as such action or omission does not constitute fraud, gross negligence, willful misconduct or a material breach of this Agreement by such Covered Person or is not made in knowing violation of the provisions of this Agreement.

(c) **Good Faith Reliance.** A Covered Person shall be fully protected in relying in good faith upon the records of the Company and upon such information, opinions, reports or statements (including financial statements and information, opinions, reports or statements as to the value or amount of the assets, liabilities, Net Income or Net Losses of the Company or any facts pertinent to the existence and amount of assets from which distributions might properly be paid) of the following Persons or groups: (i) another Member; (ii) one or more Officers or employees of the Company; (iii) any attorney, independent accountant, appraiser or other expert or professional employed or engaged by or on behalf of the Company; or (iv) any other Person selected in good faith by or on behalf of the Company, in each case as to matters that such relying Person reasonably believes to be within such other Person's professional or expert competence. The preceding sentence shall in no way limit any Person's right to rely on information to the extent provided in of the Act.

Section 8.02 Liabilities and Duties of Covered Persons.

(a) **Limitation of Liability.** This Agreement is not intended to, and does not, create or impose any fiduciary duty on any Covered Person. Furthermore, each of the Members and the Company hereby waives any and all fiduciary duties that, absent such waiver, may be implied by Applicable Law, and in doing so, acknowledges and agrees that the duties and obligation of each Covered Person to each other and to the Company are only as expressly set forth in this Agreement. The provisions of this Agreement, to the extent that they restrict the duties and liabilities of a Covered Person otherwise existing at law or in equity, are agreed by the Members to replace such other duties and liabilities of such Covered Person.

(b) **Duties.** Whenever in this Agreement a Covered Person is permitted or required to make a decision (including a decision that is in such Covered Person's "discretion" or under a grant of similar authority or latitude), the Covered Person shall be entitled to consider only such interests and factors as such Covered Person desires, including its own interests, and shall have no duty or obligation to give any consideration to any interest of or factors affecting the Company or any other Person. Whenever in this Agreement a Covered Person is permitted or required to make a decision in such Covered Person's "good faith," the Covered Person shall act under such express standard and shall not be subject to any other or different standard imposed by this Agreement or any other Applicable Law.

Section 8.03 Indemnification.

(a) **Indemnification.** To the fullest extent permitted by the Act, as the same now exists or may hereafter be amended, substituted or replaced (but, in the case of any such amendment, substitution or replacement, only to the extent that such amendment, substitution or replacement permits the Company to provide broader indemnification rights than the Act permitted the Company to provide prior to such amendment, substitution or replacement), the Company shall indemnify, hold harmless, defend, pay and reimburse any Covered Person against any and all losses, claims, damages, judgments, fines or liabilities, including reasonable legal fees or other expenses incurred in investigating or defending against
such losses, claims, damages, judgments, fines or liabilities, and any amounts expended in settlement of any claims (collectively, "Losses") to which such Covered Person may become subject by reason of:

(i) any act or omission or alleged act or omission performed or omitted to be performed on behalf of the Company, any Member or any direct or indirect Subsidiary of the foregoing in connection with the Business of the Company; or

(ii) such Covered Person being or acting in connection with the Business of the Company as a member, stockholder, Affiliate, manager, director, officer, employee or agent of the Company, any Member, or any of their respective Affiliates, or that such Covered Person is or was serving at the request of the Company as a member, manager, director, officer, employee or agent of any Person including the Company;

provided, that (x) such Covered Person acted in good faith and in a manner believed by such Covered Person to be in, or not opposed to, the best interests of the Company and, with respect to any criminal proceeding, had no reasonable cause to believe his conduct was unlawful, and (y) such Covered Person's conduct did not constitute fraud, gross negligence, willful misconduct or a material breach of this Agreement by such Covered Person or a knowing violation of the provisions of this Agreement, in either case as determined by a final, nonappealable order of a court of competent jurisdiction. In connection with the foregoing, the termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of *nolo contendere* or its equivalent, shall not, of itself, create a presumption that the Covered Person did not act in good faith or, with respect to any criminal proceeding, had reasonable cause to believe that such Covered Person's conduct was unlawful, or that the Covered Person's conduct constituted fraud, gross negligence, willful misconduct or a knowing violation or material breach of this Agreement.

(b) Reimbursement. The Company shall promptly reimburse (and/or advance to the extent reasonably required) each Covered Person for reasonable legal or other expenses (as incurred) of such Covered Person in connection with investigating, preparing to defend or defending any claim, lawsuit or other proceeding relating to any Losses for which such Covered Person may be indemnified pursuant to this Section 8.03; provided, that if it is finally judicially determined that such Covered Person is not entitled to the indemnification provided by this Section 8.03, then such Covered Person shall promptly reimburse the Company for any reimbursed or advanced expenses.

(c) Entitlement to Indemnity. The indemnification provided by this Section 8.03 shall not be deemed exclusive of any other rights to indemnification to which those seeking indemnification may be entitled under any agreement or otherwise. The provisions of this Section 8.03 shall continue to afford protection to each Covered Person regardless of whether such Covered Person remains in the position or capacity pursuant to which such Covered Person became entitled to indemnification under this Section 8.03 and shall inure to the benefit of the executors, administrators, legatees and distributees of such Covered Person.

(d) Insurance. To the extent available on commercially reasonable terms, the Company may purchase, at its expense, insurance to cover Losses covered by the foregoing indemnification provisions and to otherwise cover Losses for any breach or alleged breach by any Covered Person of such Covered Person's duties in such amount and with such deductibles as the Managing Members may reasonably determine; provided, that the failure to obtain such insurance shall not affect the right to indemnification of any Covered Person under the indemnification
provisions contained herein, including the right to be reimbursed or advanced expenses or otherwise indemnified for Losses hereunder. If any Covered Person recovers any amounts in respect of any Losses from any insurance coverage, then such Covered Person shall, to the extent that such recovery is duplicative, reimburse the Company for any amounts previously paid to such Covered Person by the Company in respect of such Losses.

(e) **Funding of Indemnification Obligation.** Notwithstanding anything contained herein to the contrary, any indemnity by the Company relating to the matters covered in this Section 8.03 shall be provided out of and to the extent of Company assets only, and no Member (unless such Member otherwise agrees in writing) shall have personal liability on account thereof or shall be required to make additional Capital Contributions to help satisfy such indemnity by the Company.

(f) **Savings Clause.** If this Section 8.03 or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Company shall nevertheless indemnify and hold harmless each Covered Person pursuant to this Section 8.03 to the fullest extent permitted by any applicable portion of this Section 8.03 that shall not have been invalidated and to the fullest extent permitted by Applicable Law.

(g) **Amendment.** The provisions of this Section 8.03 shall be a contract between the Company, on the one hand, and each Covered Person who served in such capacity at any time while this Section 8.03 is in effect, on the other hand, pursuant to which the Company and each such Covered Person intend to be legally bound. No amendment, modification or repeal of this Section 8.03 that adversely affects the rights of a Covered Person to indemnification for Losses incurred or relating to a state of facts existing prior to such amendment, modification or repeal shall apply in such a way as to eliminate or reduce such Covered Person's entitlement to indemnification for such Losses without the Covered Person's prior written consent.

**Section 8.04 Survival.** The provisions of this ARTICLE VIII shall survive the dissolution, liquidation, winding up and termination of the Company.

**ARTICLE IX**
**TRANSFER**

**Section 9.01 Restrictions on Transfer.**

(a) Except as otherwise provided in this ARTICLE IX or in Error! Reference source not found., no Member shall Transfer all or any portion of its Membership Interest in the Company without the written consent of the other Member (which consent may be granted or withheld in the sole discretion of the other Member). No Transfer of Membership Interests to a Person not already a Member of the Company shall be deemed completed until (i) the prospective Transferee is admitted as a Member of the Company in accordance with Section 4.01(b) hereof, and (ii) the prospective Transferee and the Member cooperate in good faith to provide such background information, including personal and financial information, to satisfy the regulatory authorities, as needed, for the Company to conduct the Business.

(b) Notwithstanding any other provision of this Agreement (including Section 9.02), each Member agrees that it will not Transfer all or any portion of its Membership Interest in the Company, and the Company agrees that it shall not issue any Membership Interests:
(i) except as permitted under the Securities Act and other applicable federal or state securities or blue sky laws, and then, with respect to a Transfer of Membership Interests, only upon delivery to the Company of an opinion of counsel in form and substance satisfactory to the Company to the effect that such Transfer may be effected without registration under the Securities Act;

(ii) if such Transfer or issuance would cause the Company to be considered a "publicly traded partnership" under Section 7704(b) of the Code within the meaning of Treasury Regulations Section 1.7704-1(h)(1)(ii), including the look-through rule in Treasury Regulations Section 1.7704-1(h)(3);

(iii) if such Transfer or issuance would affect the Company's existence or qualification as a limited liability company under the Delaware Act;

(iv) if such Transfer or issuance would cause the Company to lose its status as a partnership for federal income tax purposes;

(v) if such Transfer or issuance would cause a termination of the Company for federal income tax purposes;

(vi) if such Transfer or issuance would cause the Company to violate any statutory or regulatory requirements necessary for the Company to maintain licenses or permits to conduct the Business;

(vii) if such Transfer or issuance would cause the Company to be required to register as an investment company under the Investment Company Act of 1940, as amended; or

(viii) if such Transfer or issuance would cause the assets of the Company to be deemed "Plan Assets" as defined under the Employee Retirement Income Security Act of 1974 or its accompanying regulations or result in any "prohibited transaction" thereunder involving the Company.

(c) Any Transfer or attempted Transfer of any Membership Interest in violation of this Agreement shall be null and void, no such Transfer shall be recorded on the Company's books and the purported Transferee in any such Transfer shall not be treated (and the purported Transferor shall continue be treated) as the owner of such Membership Interest for all purposes of this Agreement.

(d) For the avoidance of doubt, any Transfer of a Membership Interest permitted by this Agreement shall be deemed a sale, transfer, assignment or other disposal of such Membership Interest in its entirety as intended by the parties to such Transfer, and shall not be deemed a sale, transfer, assignment or other disposal of any less than all of the rights and benefits described in the definition of the term "Membership Interest," unless otherwise explicitly agreed to by the parties to such Transfer.

Section 9.02 Permitted Transfers. The provisions of Section 9.01(a) shall not apply to any Transfer by any Member of all or any portion of its Membership Interest to its Affiliate, if approved by the regulatory authorities necessary to approve a change of ownership for purposes of maintaining any licenses or permits needed to operate the Business.
ARTICLE X
ACCOUNTING; TAX MATTERS

Section 10.01 Financial Statements. The Company shall furnish to each Member the following reports:

(a) Annual Financial Statements. As soon as available, and in any event within one hundred twenty (120) days after the end of each Fiscal Year, audited consolidated balance sheets of the Company as at the end of each such Fiscal Year and audited consolidated statements of income, cash flows and Members' equity for such Fiscal Year, in each case setting forth in comparative form the figures for the previous Fiscal Year, accompanied by the certification of independent certified public accountants of recognized national standing selected by the Managing Members, certifying to the effect that, except as set forth therein, such financial statements have been prepared in accordance with GAAP, applied on a basis consistent with prior years, and fairly present in all material respects the financial condition of the Company as of the dates thereof and the results of their operations and changes in their cash flows and Members' equity for the periods covered thereby.

Section 10.02 Inspection Rights. Upon reasonable notice from a Member, the Company shall afford each Member and its Representatives access during normal business hours to (i) the Company's properties, offices, plants and other facilities; (ii) the corporate, financial and similar records, reports and documents of the Company, including, without limitation, all books and records, minutes of proceedings, internal management documents, reports of operations, reports of adverse developments, copies of any management letters and communications with Members (including the Managing Members), and to permit each Member and its Representatives to examine such documents and make copies thereof; and (iii) any officers, senior employees and public accountants of the Company, and to afford each Member and its Representatives the opportunity to discuss and advise on the affairs, finances and accounts of the Company with such officers, senior employees and public accountants (and the Company hereby authorizes said accountants to discuss with such Member and its Representatives such affairs, finances and accounts).

Section 10.03 Income Tax Status. It is the intent of this Company and the Members that this Company shall be treated as a C-corporation for U.S., federal, state and local income tax purposes. Neither the Company nor any Member shall make an election for the Company to be classified as other than a C-corporation.

Section 10.04 Tax Returns. At the expense of the Company, the Managing Members (or any Officer that it may designate pursuant to Section 7.03) shall endeavor to cause the preparation and timely filing (including extensions) of all tax returns required to be filed by the Company pursuant to the Code as well as all other required tax returns in each jurisdiction in which the Company own property or do business.

Section 10.05 Company Funds. All funds of the Company shall be deposited in its name, or in such name as may be designated by the Managing Members, in such checking, savings or other accounts, or held in its name in the form of such other investments as shall be designated by the Managing Members. The funds of the Company shall not be commingled with the funds of any other Person. All withdrawals of such deposits or liquidations of such investments by the Company shall be made exclusively upon the signature or signatures of such Officer or Officers as the Managing Members may designate.
ARTICLE XI
DISSOLUTION AND LIQUIDATION

Section 11.01 Events of Dissolution. The Company shall be dissolved and its affairs wound up only upon the occurrence of any of the following events:

(a) The determination of the Members to dissolve the Company;

(b) The Bankruptcy of a Member, unless within ninety (90) days after the occurrence of such Bankruptcy, the other Member agrees in writing to continue the business of the Company;

(c) At the election of a non-defaulting Member, in its sole discretion, if the other Member breaches any material covenant, duty or obligation under this Agreement (including a Member's obligation to make Additional Capital Contributions pursuant to Section 3.02), which breach remains uncured for twenty (20) days after written notice of such breach was received by the defaulting Member;

(d) The sale, exchange, involuntary conversion, or other disposition or Transfer of all or substantially all the assets of the Company; or

(e) The entry of a decree of judicial dissolution under Act.

Section 11.02 Effectiveness of Dissolution. Dissolution of the Company shall be effective on the day on which the event described in Section 11.01 occurs, but the Company shall not terminate until the winding up of the Company has been completed, the assets of the Company have been distributed as provided in Section 11.03 and the Certificate of Formation shall have been cancelled as provided in Section 11.04.

Section 11.03 Liquidation. If the Company is dissolved pursuant to Section 11.01, the Company shall be liquidated and its business and affairs wound up in accordance with the Act and the following provisions:

(a) Liquidator. The Managing Members shall act as liquidator to wind up the Company (the "Liquidator"), unless the Company is being dissolved pursuant to Section 11.01(b) or Section 11.01(c) based on the Bankruptcy or a breach by the Managing Members, in which case the Liquidator shall be the Non-Managing Members. The Liquidator shall have full power and authority to sell, assign, and encumber any or all of the Company's assets and to wind up and liquidate the affairs of the Company in an orderly and business-like manner.

(b) Accounting. As promptly as possible after dissolution and again after final liquidation, the Liquidator shall cause a proper accounting to be made by a recognized firm of certified public accountants of the Company's assets, liabilities and operations through the last day of the calendar month in which the dissolution occurs or the final liquidation is completed, as applicable.

(c) Distribution of Proceeds. The Liquidator shall liquidate the assets of the Company and distribute the proceeds of such liquidation in the following order of priority, unless otherwise required by mandatory provisions of Applicable Law:
(i) First, to the payment of all of the Company's debts and liabilities to its creditors (including Members, if applicable) and the expenses of liquidation (including sales commissions incident to any sales of assets of the Company);

(ii) Second, to the establishment of and additions to reserves that are determined by the Managing Members to be reasonably necessary for any contingent unforeseen liabilities or obligations of the Company; and

(iii) Third, to the Members in accordance with the positive balances in their respective Capital Accounts, as determined after taking into account all Capital Account adjustments for the taxable year of the Company during which the liquidation of the Company occurs.

(d) Discretion of Liquidator. Notwithstanding the provisions of Section 11.03(c) that require the liquidation of the assets of the Company, but subject to the order of priorities set forth in Section 11.03(c), if upon dissolution of the Company the Liquidator reasonably determines that an immediate sale of part or all of the Company's assets would be impractical or could cause undue loss to the Members, the Liquidator may defer the liquidation of any assets except those necessary to satisfy Company liabilities and reserves, and may distribute to the Members, in lieu of cash, as tenants in common and in accordance with the provisions of Section 11.03(c), undivided interests in such Company assets as the Liquidator deems not suitable for liquidation. Any such distribution in kind shall be subject to such conditions relating to the disposition and management of such properties as the Liquidator deems reasonable and equitable and to any agreements governing the operating of such properties at such time. For purposes of any such distribution, any property to be distributed will be valued at its Fair Market Value.

Section 11.04 Cancellation of Certificate. Upon completion of the distribution of the assets of the Company as provided in Section 11.03(c) hereof, the Company shall be terminated and the Liquidator shall cause the cancellation of the Certificate of Formation in the State of [Blank] and of all qualifications and registrations of the Company as a foreign limited liability company in jurisdictions other than the State of [Blank] and shall take such other actions as may be necessary to terminate the Company.

Section 11.05 Survival of Rights, Duties and Obligations. Dissolution, liquidation, winding up or termination of the Company for any reason shall not release any party from any Loss that at the time of such dissolution, liquidation, winding up or termination already had accrued to any other party or thereafter may accrue in respect of any act or omission prior to such dissolution, liquidation, winding up or termination. For the avoidance of doubt, none of the foregoing shall replace, diminish or otherwise adversely affect any Member's right to indemnification pursuant to Section 8.03.

Section 11.06 Recourse for Claims. Each Member shall look solely to the assets of the Company for all distributions with respect to the Company, such Member's Capital Account, and such Member's share of Net Income, Net Loss and other items of income, gain, loss and deduction, and shall have no recourse therefor (upon dissolution or otherwise) against the Liquidator or any other Member.

ARTICLE XII
MISCELLANEOUS

Section 12.01 Expenses. Except as otherwise expressly provided herein, all costs and expenses, including fees and disbursements of counsel, financial advisors and accountants, incurred in connection
with the preparation and execution of this Agreement, or any amendment or waiver hereof, and the transactions contemplated hereby shall be paid by the party incurring such costs and expenses.

Section 12.02 Further Assurances. In connection with this Agreement and the transactions contemplated hereby, the Company and each Member hereby agrees, at the request of the Company or any other Member, to execute and deliver such additional documents, instruments, conveyances and assurances and to take such further actions as may be required to carry out the provisions hereof and give effect to the transactions contemplated hereby.

Section 12.03 Confidentiality.

(a) Each Member acknowledges that during the term of this Agreement, it will have access to and become acquainted with trade secrets, proprietary information and confidential information belonging to the Company and its Affiliates that are not generally known to the public, including, but not limited to, information concerning business plans, financial statements and other information provided pursuant to this Agreement, operating practices and methods, expansion plans, strategic plans, marketing plans, contracts, customer lists or other business documents that the Company treats as confidential, in any format whatsoever (including oral, written, electronic or any other form or medium) (collectively, "Confidential Information"). In addition, each Member acknowledges that: (i) the Company has invested, and continues to invest, substantial time, expense and specialized knowledge in developing its Confidential Information; (ii) the Confidential Information provides the Company with a competitive advantage over others in the marketplace; and (iii) the Company would be irreparably harmed if the Confidential Information were disclosed to competitors or made available to the public. Without limiting the applicability of any other agreement to which any Member is subject, no Member shall, directly or indirectly, disclose or use (other than solely for the purposes of such Member monitoring and analyzing its investment in the Company), including, without limitation, use for personal, commercial or proprietary advantage or profit, any Confidential Information of which such Member is or becomes aware. Each Member in possession of Confidential Information shall take all appropriate steps to safeguard such information and to protect it against disclosure, misuse, espionage, loss and theft.

(b) Nothing contained in Section 12.03(a) shall prevent any Member from disclosing Confidential Information: (i) upon the order of any court or administrative agency; (ii) upon the request or demand of any regulatory agency or authority having jurisdiction over such Member; (iii) to the extent compelled by legal process or required or requested pursuant to subpoena, interrogatories or other discovery requests; (iv) to the extent necessary in connection with the exercise of any remedy hereunder; (v) to the other Member; (vi) to such Member's Representatives who, in the reasonable judgment of such Member, need to know such Confidential Information and agree to be bound by the provisions of this Section 12.03 as if a Member; or (vii) to any potential Permitted Transferee in connection with a proposed Transfer of Membership Interests from such Member, as long as such Transferee agrees to be bound by the provisions of this Section 12.03 as if a Member; provided, that in the case of clause (i), (ii) or (iii), such Member shall notify the Company and other Member of the proposed disclosure as far in advance of such disclosure as practicable (but in no event make any such disclosure before notifying the Company and other Member) and use reasonable efforts to ensure that any Confidential Information so disclosed is accorded confidential treatment satisfactory to the Company, when and if available.

(c) The restrictions of Section 12.03(a) shall not apply to Confidential Information that: (i) is or becomes generally available to the public other than as a result of a disclosure by a
Member in violation of this Agreement; (ii) is or has been independently developed or conceived by such Member without use of Confidential Information; or (iii) becomes available to such Member or any of its Representatives on a non-confidential basis from a source other than the Company, the other Member or any of their respective Representatives, provided, that such source is not known by the receiving Member to be bound by a confidentiality agreement regarding the Company.

(d) The obligations of each Member under this Section 12.03 shall survive (i) the termination, dissolution, liquidation and winding up of the Company, (ii) the withdrawal of such Member from the Company, and (iii) such Member's Transfer of its Membership Interests.

Section 12.04 Notices. All notices, requests, consents, claims, demands, waivers and other communications hereunder shall be in writing and shall be deemed to have been given: (a) when delivered by hand (with written confirmation of receipt); (b) when received by the addressee if sent by a nationally recognized overnight courier (receipt requested); (c) on the date sent by facsimile or e-mail of a PDF document (with confirmation of transmission) if sent during normal business hours of the recipient, and on the next Business Day if sent after normal business hours of the recipient; or (d) on the third day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid. Such communications must be sent to the respective parties at the addresses on file with the Company and Managing Members.

Section 12.05 Headings. The headings in this Agreement are inserted for convenience or reference only and are in no way intended to describe, interpret, define, or limit the scope, extent or intent of this Agreement or any provision of this Agreement.

Section 12.06 Severability. If any term or provision of this Agreement is held to be invalid, illegal or unenforceable under Applicable Law in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction. Except as provided in Section 8.03(f), upon such determination that any term or other provision is invalid, illegal or unenforceable, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

Section 12.07 Entire Agreement. This Agreement, together with the Certificate of Formation and all related Exhibits and Schedules, constitutes the sole and entire agreement of the parties to this Agreement with respect to the subject matter contained herein and therein, and supersedes all prior and contemporaneous understandings, agreements, representations and warranties, both written and oral, with respect to such subject matter.

Section 12.08 Successors and Assigns. Subject to the restrictions on Transfers set forth herein, this Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors and assigns.

Section 12.09 No Third-party Beneficiaries. Except as provided in ARTICLE VIII, which shall be for the benefit of and enforceable by Covered Persons as described therein, this Agreement is for the sole benefit of the parties hereto (and their respective heirs, executors, administrators, successors and assigns) and nothing herein, express or implied, is intended to or shall confer upon any other Person, including any creditor of the Company, any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.
Section 12.10 Amendment. No provision of this Agreement may be amended or modified except by an instrument in writing executed by all of the Members. Any such written amendment or modification will be binding upon the Company and each Member. Notwithstanding the foregoing, amendments to Schedule A following any new issuance, redemption, repurchase or Transfer of Membership Interests in accordance with this Agreement may be made by the Managing Members without the consent of or execution by the Members.

Section 12.11 Waiver. No waiver by any party of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the party so waiving. No waiver by any party shall operate or be construed as a waiver in respect of any failure, breach or default not expressly identified by such written waiver, whether of a similar or different character, and whether occurring before or after that waiver. No failure to exercise, or delay in exercising, any right, remedy, power or privilege arising from this Agreement shall operate or be construed as a waiver thereof, nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege. For the avoidance of doubt, nothing contained in this Section 12.01 shall diminish any of the explicit and implicit waivers described in this Agreement, including in Section 12.13 hereof.

Section 12.12 Governing Law. All issues and questions concerning the application, construction, validity, interpretation and enforcement of this Agreement shall be governed by and construed in accordance with the internal laws of the State of [ ], without giving effect to any choice or conflict of law provision or rule (whether of the State of [ ] or any other jurisdiction) that would cause the application of laws of any jurisdiction other than those of the State of [ ].

Section 12.13 Waiver of Jury Trial. Each party hereto hereby acknowledges and agrees that any controversy that may arise under this Agreement is likely to involve complicated and difficult issues and, therefore, each such party irrevocably and unconditionally waives any right it may have to a trial by jury in respect of any legal action arising out of or relating to this Agreement or the transactions contemplated hereby.

Section 12.14 Equitable Remedies. Each party hereto acknowledges that a breach or threatened breach by such party of any of its obligations under this Agreement would give rise to irreparable harm to the other parties, for which monetary damages would not be an adequate remedy, and hereby agrees that in the event of a breach or a threatened breach by such party of any such obligations, each of the other parties hereto shall, in addition to any and all other rights and remedies that may be available to them in respect of such breach, be entitled to equitable relief, including a temporary restraining order, an injunction, specific performance and any other relief that may be available from a court of competent jurisdiction (without any requirement to post bond).

Section 12.15 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail or other means of Electronic Transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

[Signature Page Follows]
IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first written above by their respective officers thereunto duly authorized.
## SCHEDULE A

### MEMBERS SCHEDULE

<table>
<thead>
<tr>
<th>Member Name and Address</th>
<th>Membership Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Attachment C: Property Title, Lease, or Option to Acquire Property Location

Instructions:
- Attach one of the following:
  - Evidence of the applicant’s clear legal title to or option to purchase the proposed site and facility
  - A fully-executed copy of the applicant’s unexpired lease for the proposed site and facility and a written statement from the property owner that the applicant may operate a medical marijuana organization on the proposed site for, at a minimum, the term of the initial permit
  - Other evidence that shows that the applicant has a location to operate its medical marijuana organization
- Complete this cover sheet. Scan this sheet and the appropriate document(s) and save it as a PDF file called “Attachment C,” using the appropriate file name format

<table>
<thead>
<tr>
<th>Business Name, as it appears on the applicant’s certificate of incorporation, charter, bylaws, partnership agreement or other official documents:</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTI Pennsylvania, LLC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trade names and DBA (doing business as) names:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Principal Business Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td>123 Main St, Anytown, USA</td>
</tr>
</tbody>
</table>

[Redacted Address Information]
Affidavit of Business History

State of ___________  )
County of ___________  ) ss:

The undersigned, ________________________________, hereby certifies the following:

During the 10 years preceding the filing date of the initial permit application, the following principal(s), operator(s), financial backer(s) and employee(s), have held a position of management or ownership of a controlling interest in any other business in this Commonwealth or any other jurisdiction involving the manufacturing or distribution of medical marijuana or a controlled substance:

<table>
<thead>
<tr>
<th>Name of individual</th>
<th>Role (principal, operator, financial backer or employee)</th>
<th>Business name and address</th>
<th>Position of management or ownership of a controlling interest</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>See attached.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I hereby certify that I am authorized to execute this affidavit on behalf of the applicant and that the information contained herein is true and correct and that there is no misrepresentation, falsification or omissions in this affidavit. I am further aware that any false or misleading statement or omitted information is punishable under the applicable provisions of 18 Pa. C.S. Ch. 49 (relating to falsification and intimidation).

A photocopy, facsimile or other electronic version of this document shall be accepted as an original signature.
Affidavit of Criminal Offense

State of ____________
County of ____________

The undersigned, ____________________________, hereby certifies the following by checking the boxes below:

Principal(s):
☒ No principal(s) listed in this permit application have been convicted of a criminal offense graded higher than a summary offense.
☐ One or more principals listed in this permit application have been convicted of a criminal offense graded higher than a summary offense.

If one or more principal(s) listed in this permit application has been convicted of a criminal offense graded higher than a summary offense, please provide below the name(s) of the principal(s) and the offense(s) of which one or more principal(s) was convicted.

Name(s):
Offense(s):

Operator(s):
☒ No operator(s) listed in this permit application have been convicted of a criminal offense graded higher than a summary offense.
☐ One or more operator(s) listed in this permit application has been convicted of a criminal offense graded higher than a summary offense.

If one or more operator(s) listed in this permit application has been convicted of a criminal offense graded higher than a summary offense, please provide below the name(s) of the operator(s) and the offense(s) of which one or more operator(s) was convicted.

Name(s):
Offense(s):

Financial Backer(s):
☒ No financial backer(s) listed in this permit application have been convicted of a criminal offense graded higher than a summary offense.
☐ One or more financial backer(s) listed in this permit application have been convicted of a criminal offense graded higher than a summary offense.

If one or more financial backer(s) listed in this permit application have been convicted of a criminal offense graded higher than a summary offense, please provide below the name(s) of the financial backer(s) and the offense(s) of which one or more financial backer(s) was convicted.

Name(s): ______________________________________

Offense(s): ____________________________________

A photocopy, facsimile or other electronic version of this document shall be accepted as an original signature.
ATTACHMENT I-1: AFFIDAVIT OF CAPITAL SUFFICIENCY FOR A GROWER/PROCESSOR PERMIT APPLICANT

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF HEALTH

AFFIDAVIT OF CAPITAL SUFFICIENCY

State of ________  }  
County of ________  }  ss:

I/WE

For the following applicant:

NAME OF BUSINESS

GTI PENNSYLVANIA, LLC

ADDRESS

325 WEST HURON #230

CITY  STATE  ZIP CODE  COUNTY

hereby certify that the Applicant named has at least $2,000,000 in capital, $500,000 of which is on deposit with one or more financial institutions, as follows (capital may include cash or securities, real estate, or other assets):
<table>
<thead>
<tr>
<th>Type of Capital</th>
<th>Source of Capital</th>
<th>Total Value of Capital</th>
<th>Value not encumbered by debt or other obligations</th>
<th>If on deposit, name and address of financial institution</th>
<th>If on deposit, account number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I hereby certify that I am authorized to execute this affidavit on behalf of the applicant and that the information contained herein is true and correct and that there is no misrepresentation, falsification or omissions in this affidavit. I am further aware that any false or misleading statement or omitted information is punishable under the applicable provisions of 18 Pa. C.S. Ch. 49 (relating to falsification and intimidation).

[Signature of Affiant and Title]

[Date]

A photocopy, facsimile or other electronic version of this document shall be accepted as an original signature.
## Attachment J: Sample Medical Marijuana Product Label

### Instructions:
- Provide a sample label for each medical marijuana product you expect to produce.
- Complete this cover sheet. Scan this sheet and the sample labels and save it as a PDF file called “Attachment J,” using the appropriate file name format.

### Business Name
Business Name, as it appears on the applicant’s certificate of incorporation, charter, bylaws, partnership agreement or other official documents:
GTI Pennsylvania, LLC

### Trade names and DBA (doing business as) names:

<table>
<thead>
<tr>
<th>Principal Business Address: 325 W Huron Street, Suite 230</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>City:</strong> Chicago</td>
</tr>
<tr>
<td><strong>Phone:</strong> [Redacted]</td>
</tr>
</tbody>
</table>
**MEDICAL MARIJUANA TINCTURE - SATIVA**

0.85 FL. OZ. (25 ML) • CBD 50MG / THC 50MG • 1 SERVING = 2MG THC/1ML

SERVINGS PER CONTAINER: ABOUT 25 • PER SERVING: CBD 2MG / THC 2MG

<table>
<thead>
<tr>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
<th>PRODUCT FACTS</th>
<th>INGREDIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>25</td>
<td>AMOUNT PER SERVING: CALORIES: 0, CARBS: 0, PROTEIN: 0, SUGARS: 0, CHOLESTEROL: 0</td>
<td>VEGETABLE OIL, CANNABIS OIL, FLAVORING.</td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCA)</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCA)</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabidiolic acid (CBDa)</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabigerol (CBG)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabichromene (CBC)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PRODUCT SAFETY WARNING:**

⚠️ KEEP OUT OF REACH OF CHILDREN.

⚠️ THIS PRODUCT IS FOR MEDICAL USE ONLY.

Medical marijuana must be kept in the original container in which it was dispensed.

Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

PACKAGED ON: 06/01/2017

EXPIRATION DATE: 06/01/2018

USE BY DATE: N/A

FREEZE BY: N/A

PACKAGED BY:

AGENT NO. 12345

BATCH NO. MCT5123

MANUFACTURED FOR:

DISPENSARY X2

123 RELIEF STREET

HARRISBURG, PA 17103

FOR SUB-LINGUAL USE ONLY.

INTOXICATING EFFECT MAY BE DELAYED.

STORE IN A COOL DRY PLACE

---

**MEDICAL MARIJUANA CAPSULES - SATIVA**

10 X 10MG CAPSULES • CBD 10MG / THC 100MG • 1 SERVING = 1 CAPSULE

SERVINGS PER CONTAINER: 10 • PER CAPSULE: CBD 1MG / THC 10MG

<table>
<thead>
<tr>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
<th>PRODUCT FACTS</th>
<th>INGREDIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>25</td>
<td>AMOUNT PER SERVING: CALORIES: 0, CARBS: 0, PROTEIN: 0, SUGARS: 0, CHOLESTEROL: 0</td>
<td>CANNABIS OIL, CAPSULE</td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCA)</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCA)</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabidiolic acid (CBDa)</td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabigerol (CBG)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannabichromene (CBC)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PRODUCT SAFETY WARNING:**

⚠️ KEEP OUT OF REACH OF CHILDREN.

⚠️ THIS PRODUCT IS FOR MEDICAL USE ONLY.

Medical marijuana must be kept in the original container in which it was dispensed.

Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

PACKAGED ON: 06/01/2017

EXPIRATION DATE: 06/01/2018

USE BY DATE: N/A

FREEZE BY: N/A

PACKAGED BY:

AGENT NO. 12345

BATCH NO. MCT5123

MANUFACTURED FOR:

DISPENSARY X2

123 RELIEF STREET

HARRISBURG, PA 17103

FOR ORAL USE ONLY.

INTOXICATING EFFECT MAY BE DELAYED.

STORE IN A COOL DRY PLACE
### MEDICAL MARIJUANA TABLETS - SATIVA

- **10 x 10MG TABLETS** • **CBD 10MG / THC 100MG** • **1 SERVING = 1 TABLET**
- **SERVINGS PER CONTAINER:** 10 • **PER TABLET:** CBD 1MG / THC 10MG

<table>
<thead>
<tr>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>2.5</td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCA)</td>
<td>0.1</td>
</tr>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>0.1</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>2.5</td>
</tr>
<tr>
<td>Cannabigerolic acid (CBGa)</td>
<td>0.1</td>
</tr>
<tr>
<td>Cannabigerol (CBG)</td>
<td>N/A</td>
</tr>
<tr>
<td>Cannabichromene (CBC)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**PRODUCT SAFETY WARNING:**
- Keep out of reach of children.
- This product is for medical use only.
- Medical marijuana must be kept in the original container in which it was dispensed.
- Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

**PACKAGED ON:** 06/01/2017 **EXPIRATION DATE:** 06/01/2018 **USE BY DATE:** N/A **FREEZE BY:** N/A

**FOR ORAL USE ONLY.** **INTOXICATING EFFECT MAY BE DELAYED.** **STORE IN A COOL DRY PLACE**

### MEDICAL MARIJUANA DISSOLVABLE FILMS - SATIVA

- **5 x 10MG FILMS** • **CBD 0MG / THC 50MG** • **1 SERVING = 1 FILM**
- **SERVINGS PER CONTAINER:** 5 • **PER FILM:** CBD 0MG / THC 10MG

<table>
<thead>
<tr>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>2.5</td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCA)</td>
<td>0.1</td>
</tr>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>0.1</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>N/A</td>
</tr>
<tr>
<td>Cannabigerolic acid (CBGa)</td>
<td>0.1</td>
</tr>
<tr>
<td>Cannabigerol (CBG)</td>
<td>N/A</td>
</tr>
<tr>
<td>Cannabichromene (CBC)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**PRODUCT SAFETY WARNING:**
- Keep out of reach of children.
- This product is for medical use only.
- Medical marijuana must be kept in the original container in which it was dispensed.
- Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

**PACKAGED ON:** 06/01/2017 **EXPIRATION DATE:** 06/01/2018 **USE BY DATE:** N/A **FREEZE BY:** N/A

**FOR ORAL USE ONLY.** **INTOXICATING EFFECT MAY BE DELAYED.** **STORE IN A COOL DRY PLACE**
# Medical Marijuana Refined Oil 1:1 - Sativa

**1 Gram**  
CBD 65% / THC 65%

<table>
<thead>
<tr>
<th>Active Chemicals</th>
<th>%</th>
<th>Active Chemicals</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>65%</td>
<td>Cannabidiol (CBDV)</td>
<td>1</td>
</tr>
<tr>
<td>Tetrahydrocannabinol Acid (THCA)</td>
<td>N/A</td>
<td>Cannabidiol (CBD)</td>
<td>1</td>
</tr>
<tr>
<td>Tetrahydrocannabinol (THCV)</td>
<td>1</td>
<td>Cannabigerol (CBG)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>65%</td>
<td>Cannabichromene (CBC)</td>
<td>1</td>
</tr>
</tbody>
</table>

**Ingredients:**  
Extracted Cannabis Oil

**Allergy Warning:**  
This product was produced in a facility that may contain soybeans.

**Product Safety Warning:**  
Keep out of reach of children.  
This product is for medical use only.  
Medical marijuana must be kept in the original container in which it was dispensed.  
Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

- **Package:**  
  - Packaged on: 06/01/2017  
  - Expiration Date: 06/01/2018  
  - Batch No.: MCTS123  
  - Process Lot: MCTSP123

- **Manufactured For:**  
  - Dispensary XYZ  
  - 123 Relief Street  
  - Harrisburg, PA 17103

# Medical Marijuana Raw Oil - CBD

**1 Gram**  
CBD 60% / THC 1%

<table>
<thead>
<tr>
<th>Active Chemicals</th>
<th>%</th>
<th>Active Chemicals</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>60%</td>
<td>Cannabidiol (CBDV)</td>
<td>1</td>
</tr>
<tr>
<td>Tetrahydrocannabinol Acid (THCA)</td>
<td>N/A</td>
<td>Cannabidiol (CBD)</td>
<td>1</td>
</tr>
<tr>
<td>Tetrahydrocannabinol (THCV)</td>
<td>1</td>
<td>Cannabigerol (CBG)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>1</td>
<td>Cannabichromene (CBC)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabinadiol Acid (CBDCA)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ingredients:**  
Extracted Cannabis Oil

**Allergy Warning:**  
This product was produced in a facility that may contain soybeans.

**Product Safety Warning:**  
Keep out of reach of children.  
This product is for medical use only.  
Medical marijuana must be kept in the original container in which it was dispensed.  
Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

- **Package:**  
  - Packaged on: 06/01/2017  
  - Expiration Date: 06/01/2018  
  - Batch No.: MCTS123  
  - Process Lot: MCTSP123

- **Manufactured For:**  
  - Dispensary XYZ  
  - 123 Relief Street  
  - Harrisburg, PA 17103
MEDICAL MARIJUANA SHATTER - SATIVA

1 GRAM
CBD 0% / THC 85%

ACTIVE CHEMICALS %

<table>
<thead>
<tr>
<th>Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>3</td>
</tr>
<tr>
<td>Tetrahydrocannabinol acid (THCA)</td>
<td>85</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>2</td>
</tr>
<tr>
<td>Cannabinol (CBN)</td>
<td>2</td>
</tr>
</tbody>
</table>

ACTIVE CHEMICALS %

<table>
<thead>
<tr>
<th>Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabidiol (CBDV)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabinol (CBN)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabinol (C8H8)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabinol (C8H8)</td>
<td>1</td>
</tr>
</tbody>
</table>

INGREDIENTS:
EXTRACTED CANNABIS OIL

ALLERGY WARNING:
This product was produced in a facility that may contain soybeans.

PRODUCT SAFETY WARNING:
KEEP OUT OF REACH OF CHILDREN.

FOR VAPORIZATION ONLY.

INTOXICATING EFFECT MAY BE DELAYED.

STORE IN A COOL, DRY PLACE.

PACKAGED ON: 06/01/2017
EXPIRATION DATE: 06/01/2018
USE BY DATE: N/A
FREZBE BY: N/A

PACKAGED BY:
AGENT NO. 12345
AGENT NO. 67890

BATCH NO. MCT5123
PROCESS LOT: MCTSP123
MANUFACTURED FOR:
DISPENSARY XYZ
123 RELIEF STREET
HARRISBURG, PA 17103

MEDICAL MARIJUANA WAX - SATIVA

1 GRAM
CBD 0% / THC 85%

ACTIVE CHEMICALS %

<table>
<thead>
<tr>
<th>Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>3</td>
</tr>
<tr>
<td>Tetrahydrocannabinol acid (THCA)</td>
<td>85</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>2</td>
</tr>
<tr>
<td>Cannabinol (CBN)</td>
<td>2</td>
</tr>
</tbody>
</table>

ACTIVE CHEMICALS %

<table>
<thead>
<tr>
<th>Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabidiol (CBDV)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabinol (CBN)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabinol (C8H8)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabinol (C8H8)</td>
<td>1</td>
</tr>
</tbody>
</table>

INGREDIENTS:
EXTRACTED CANNABIS OIL

ALLERGY WARNING:
This product was produced in a facility that may contain soybeans.

PRODUCT SAFETY WARNING:
KEEP OUT OF REACH OF CHILDREN.

FOR VAPORIZATION ONLY.

INTOXICATING EFFECT MAY BE DELAYED.

STORE IN A COOL, DRY PLACE.

PACKAGED ON: 06/01/2017
EXPIRATION DATE: 06/01/2018
USE BY DATE: N/A
FREZBE BY: N/A

PACKAGED BY:
AGENT NO. 12345
AGENT NO. 67890

BATCH NO. MCT5123
PROCESS LOT: MCTSP123
MANUFACTURED FOR:
DISPENSARY XYZ
123 RELIEF STREET
HARRISBURG, PA 17103
**MEDICAL MARIJUANA LIVE RESIN - SATIVA**

1 GRAM  
CBD 0% / THC 85%

<table>
<thead>
<tr>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>3</td>
<td>Cannabidiol (CBD)</td>
<td>2</td>
</tr>
<tr>
<td>Tetrahydrocannabinol Acid (THCA)</td>
<td>85</td>
<td>Cannabinol (CBN)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabidiol Acid (THCV)</td>
<td>2</td>
<td>Cannabichromene (CBC)</td>
<td>1</td>
</tr>
</tbody>
</table>

**INGREDIENTS:**  
EXTRACTED CANNABIS OIL

**FOR VAPORIZATION ONLY.**

**INTOXICATING EFFECT MAY BE DELAYED**

**ALERT**

This product was produced in a facility that may contain soybeans.

**PRODUCT SAFETY WARNING:**  
KEEP OUT OF REACH OF CHILDREN.  
THIS PRODUCT IS FOR MEDICAL USE ONLY.  
Medical marijuana must be kept in the original container in which it was dispensed.  
Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

PACKAGED ON: 06/01/2017  
EXPIRATION DATE: 06/01/2018  
FREZEE BY: N/A

PACKAGED BY: AGENT NO. 12345  
SHIPPED BY: AGENT NO. 67890  
BATCH NO.: MCT5123  
PROCESS LOT: MCTSP123  
MANUFACTURED FOR: DISPENSARY XYZ  
123 RELIEF STREET  
HARRISBURG, PA 17103

**MEDICAL MARIJUANA CRUMBLE - SATIVA**

1 GRAM  
CBD 0% / THC 85%

<table>
<thead>
<tr>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
<th>ACTIVE CHEMICALS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>3</td>
<td>Cannabidiol (CBD)</td>
<td>2</td>
</tr>
<tr>
<td>Tetrahydrocannabinol Acid (THCA)</td>
<td>85</td>
<td>Cannabinol (CBN)</td>
<td>1</td>
</tr>
<tr>
<td>Cannabidiol Acid (THCV)</td>
<td>2</td>
<td>Cannabichromene (CBC)</td>
<td>1</td>
</tr>
</tbody>
</table>

**INGREDIENTS:**  
EXTRACTED CANNABIS OIL

**FOR VAPORIZATION ONLY.**

**INTOXICATING EFFECT MAY BE DELAYED**

**ALERT**

This product was produced in a facility that may contain soybeans.

**PRODUCT SAFETY WARNING:**  
KEEP OUT OF REACH OF CHILDREN.  
THIS PRODUCT IS FOR MEDICAL USE ONLY.  
Medical marijuana must be kept in the original container in which it was dispensed.  
Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

PACKAGED ON: 06/01/2017  
EXPIRATION DATE: 06/01/2018  
FREZEE BY: N/A

PACKAGED BY: AGENT NO. 12345  
SHIPPED BY: AGENT NO. 67890  
BATCH NO.: MCT5123  
PROCESS LOT: MCTSP123  
MANUFACTURED FOR: DISPENSARY XYZ  
123 RELIEF STREET  
HARRISBURG, PA 17103
MEDICAL MARIJUANA CREAM 1:1 - SATIVA

NET WEIGHT 28 GRAMS
100MG TRANSDERMAL COMPOUND • CBD 50MG / 50MG THC

ACTIVE CHEMICALS

<table>
<thead>
<tr>
<th>Active Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>1</td>
</tr>
<tr>
<td>Tetrahydrocannabinol Acid (THCA)</td>
<td>20</td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCO)</td>
<td>N/A</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>20</td>
</tr>
<tr>
<td>Cannabinolic Acid (CBDA)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

ACTIVE CHEMICALS

<table>
<thead>
<tr>
<th>Active Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabidiol (CBDV)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBN)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBG)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBG)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBDNA)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

INGREDIENTS:
BEEWAX, MANGO BUTTER, SUNFLOWER SEED OIL, CAPRIC CAPRYLIC TRIGLYCERIDE, SESAMO SEED OIL, JOJOBA OIL, SUNFLOWER SEED OIL, OLIVE OIL, CANNABIS EXTRACT, VITAMIN E, VITAMIN A, MENTHOL, LECTIN, ACID, OPTIMIX, NATURAL FRAGRANCE

ALERTING WARNING:
This product contains cannabis and was produced in a facility that may contain soybeans.

PRODUCT SAFETY WARNING:
Keep out of reach of children. This product is for medical use only.
Medical marijuana must be kept in the original container in which it was dispensed.
Unauthorized use is unlawful and will subject the purchaser to criminal penalties.

PACKAGED ON: 06/01/2017
EXPIRATION DATE: 06/01/2018
USE BY DATE: N/A
FREEZE BY: N/A

PACKAGED BY: AGENT NO. 12345
SHIPPED BY: AGENT NO. 67890
BATCH NO. MCT5123
PROCESS LOT: MCT5123
MANUFACTURED FOR:
DISPENSARY XZ
123 RELIEF STREET
HARRISBURG, PA 17103

MEDICAL MARIJUANA PATCH - SATIVA

NET WEIGHT 0.92 GRAMS
1 TRANSDERMAL PATCH • CBD 0.5MG / 20MG THC

ACTIVE CHEMICALS

<table>
<thead>
<tr>
<th>Active Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrocannabinol (THC)</td>
<td>0.01</td>
</tr>
<tr>
<td>Tetrahydrocannabinol Acid (THCA)</td>
<td>20</td>
</tr>
<tr>
<td>Tetrahydrocannabinolic Acid (THCO)</td>
<td>N/A</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>0.50</td>
</tr>
<tr>
<td>Cannabinolic Acid (CBDA)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

ACTIVE CHEMICALS

<table>
<thead>
<tr>
<th>Active Chemical</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannabidiol (CBDV)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBD)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBN)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBG)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBG)</td>
<td>0.01</td>
</tr>
<tr>
<td>Cannabidiol (CBDNA)</td>
<td>0.01</td>
</tr>
</tbody>
</table>

INGREDIENTS:
LONG CHAIN SILK POLYMER, LECITHIN, LECIT
RELEASE AUTHORIZATION

TO: 

(Do not write above this line – For Department of Health Only)

FROM: GTI Pennsylvania, LLC

Applicant’s Name

I, _______________ on behalf of the undersigned applicant, have filed a permit application with the Pennsylvania Department of Health ("Department"). I certify that I am authorized by the applicant to submit this Release Authorization on its behalf and to bind the applicant to all provisions within this Release Authorization. I understand that the applicant is seeking the granting of a privilege and acknowledge that the burden of proving the applicant's qualifications and suitability for a favorable determination is at all times the burden of the applicant.

I understand that a background investigation may be conducted by the Department pursuant to its statutory duty to investigate the character, honesty, integrity and suitability of myself and any entity with which I am associated. I further understand and agree that I am voluntarily executing this Release Authorization to expressly authorize and permit the Department to obtain any and all information it deems necessary, and accept any risk of adverse public notice, embarrassment, criticism, or other action or financial loss which may result from action with respect to this permit application.

The rights and powers herein are granted to facilitate the background investigation being conducted by the Department at my request and on behalf of the applicant and is not otherwise intended to create or establish a legal or fiduciary relationship between the Department, its agents and employees, and me. I hereby acknowledge that no such relationship exists.

1. I hereby authorize and request every person, firm, company, corporation, board, association or institution of any kind, and every Federal, state or local government entity, including but not limited to every court, law enforcement agency, criminal justice agency or probation department, without exception, both foreign and domestic, to whom this Release Authorization is presented having any knowledge, information, documents, forms, photographs, computer files, accounts, ledgers or other items about, relating to or concerning the applicant and to fully discuss with and answer any inquiry made by any duly authorized investigator of the Pennsylvania Department of Health.

2. If this Release Authorization is presented to any brokerage firm, bank, savings and loan, or other financial institution or officer of same, I hereby authorize and request any and all documents, records or correspondence pertaining to the applicant, including but not limited to past loan information, notes, checking account records, savings deposit records, safe deposit box records, passbook records and general ledger folio sheets.

3. I hereby authorize an agent of the Department to obtain and review copies of any and all documents, records or correspondence pertaining to myself and the applicant, and I hereby authorize any Federal, state or municipal agency or body, law enforcement agency or criminal justice agency or department, tax agency or authority, regulatory agency, authority or body, to make full and complete disclosure of any and all information and documents including, but not limited to, documents and information otherwise privileged or not subject to public disclosure, as well as other information on file or available concerning the applicant.

4. This Release Authorization extends to the review and copy of any information protected by law or contact from disclosure, privilege or obligation.

5. I do for the applicant, as well as for myself, my heirs, executors, administrators, successors and assigns, hereby release, remise, exonerate and forever discharge the Department, its members, agents and employees, the Commonwealth of Pennsylvania and its instrumentalities, and any agents and employees
thereof, from any and all liabilities including but not limited to all manner of actions, causes of action, suits, debts, judgments, executions, claims, and demands whatsoever, known and unknown, in law or equity, which exist now or in the future against those entities and persons other than relating to a willfully unlawful disclosure or publication of material or information acquired during my investigation.

6. I do for the applicant, as well as for myself, my heirs, administrators, successors and assigns, hereby release, remise, exonerate and forever discharge every person, firm, company, corporation, board, association or institution of any kind, and every Federal, state or local government entity, including but not limited to every court, law enforcement agency, criminal justice agency or probation department, without exception, both foreign and domestic, to whom this request is presented, and any agents or employees thereof, from any and all liabilities, including but not limited to all manner of actions, causes of action, suits, debts, judgments, executions, claims and demands whatsoever, known or unknown, in law or equity, which exist now or in the future against those entities and persons to whom this request is presented, and any agents or employees thereof, arising out of or by reason of the furnishing or inspection of documents, records or other information released in compliance with a request made pursuant to, or as a result of, having been presented with, this Release Authorization.

7. The applicant agrees to indemnify and hold harmless the Department, its officials and employees and every person, firm, company, corporation, board, association or institution of any kind, and every Federal, state or local government agency, to whom this request is presented and form and against all claims, damages, losses, and expenses including reasonable attorneys' fees arising out of or by reason of, the acts permitted and provided for in the Release Authorization.

8. I agree that a reproduction of this request by photocopy, facsimile or other similar process shall be for all intents and purposes as valid as the original.

IN WITNESS WHEREOF, I have executed this Release on this __________ day of __________, 2017.
Attachment L: Applicant Priorities for Multiple Applications

Instructions:
- This attachment is for applicants who are submitting multiple medical marijuana organization permit applications. Use this attachment to indicate your priorities for which medical marijuana regions or counties you prefer for issuance of a permit. Not providing Attachment L as part of your medical marijuana organization permit application indicates that you have no preference.
- If you submit this form more than once, the last form the Department receives will represent your prioritization. This form cannot be submitted without being part of an application.
- If you elect to submit this attachment, please scan the completed form and save it as a PDF file called “Attachment L,” using the appropriate file name format.

Business Name, as it appears on the applicant’s certificate of incorporation, charter, bylaws, partnership agreement or other official documents:
GTI Pennsylvania, LLC

Trade names and DBA (doing business as) names:

<table>
<thead>
<tr>
<th>Principal Business Address: 325 W Huron Street, Suite 230</th>
</tr>
</thead>
<tbody>
<tr>
<td>City: Chicago</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
</tbody>
</table>

A. Priorities for Multiple Grower/Processor Permit Applications

<table>
<thead>
<tr>
<th>MEDICAL MARIJUANA REGION</th>
<th>PRIORITY (If you intend to submit a permit application for more than one medical marijuana region, please rank your preferred region from 1-6, with 1 being the highest ranking)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### B. Priorities for Multiple Dispensary Permit Applications

<table>
<thead>
<tr>
<th>MEDICAL MARIJUANA REGION</th>
<th>For each region for which you plan to submit multiple applications, please indicate the counties in order of priority, with 1 being the highest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name and Residential Address</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---</td>
</tr>
<tr>
<td><strong>First Name:</strong> Duane</td>
<td><strong>Middle Name:</strong> Craig</td>
</tr>
<tr>
<td>Occupation:</td>
<td>Also Known As:</td>
</tr>
<tr>
<td>Date of Birth:</td>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 2:</td>
<td>Address 3:</td>
</tr>
<tr>
<td>City:</td>
<td>State:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Gary</td>
<td><strong>Middle Name:</strong> Allan</td>
</tr>
<tr>
<td>Occupation:</td>
<td>Also Known As:</td>
</tr>
<tr>
<td>Date of Birth:</td>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 2:</td>
<td>Address 3:</td>
</tr>
<tr>
<td>City:</td>
<td>State:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Jeffrey</td>
<td><strong>Middle Name:</strong> H</td>
</tr>
<tr>
<td>Occupation:</td>
<td>Also Known As:</td>
</tr>
<tr>
<td>Date of Birth:</td>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 2:</td>
<td>Address 3:</td>
</tr>
<tr>
<td>City:</td>
<td>State:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Susan</td>
<td><strong>Middle Name:</strong> Elizabeth</td>
</tr>
<tr>
<td>Occupation:</td>
<td>Also Known As:</td>
</tr>
<tr>
<td>Date of Birth:</td>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 2:</td>
<td>Address 3:</td>
</tr>
<tr>
<td>City:</td>
<td>State:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Jennifer</td>
<td><strong>Middle Name:</strong></td>
</tr>
<tr>
<td>Occupation:</td>
<td>Also Known As:</td>
</tr>
<tr>
<td>Date of Birth:</td>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address Line 2:</td>
<td>Address 3:</td>
</tr>
<tr>
<td>City:</td>
<td>State:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: N/A</td>
</tr>
<tr>
<td>Name and Residential Address</td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>First Name:</strong> Wendy</td>
<td><strong>Middle Name:</strong> Alison</td>
</tr>
<tr>
<td>Occupation:</td>
<td>Title in applicant’s business:</td>
</tr>
<tr>
<td>Also Known As:</td>
<td>Date of Birth:</td>
</tr>
<tr>
<td>Address Line 1:</td>
<td>Address Line 2:</td>
</tr>
<tr>
<td>Address 3:</td>
<td>City:</td>
</tr>
<tr>
<td>Phone:</td>
<td>Fax: N/A</td>
</tr>
<tr>
<td>Email:</td>
<td>Zip Code:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Dina</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
<tr>
<td>Also Known As:</td>
</tr>
<tr>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address 3:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
<tr>
<td>Email:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Terrance</td>
</tr>
<tr>
<td>Occupation:</td>
</tr>
<tr>
<td>Also Known As:</td>
</tr>
<tr>
<td>Address Line 1:</td>
</tr>
<tr>
<td>Address 3:</td>
</tr>
<tr>
<td>Phone:</td>
</tr>
<tr>
<td>Email:</td>
</tr>
</tbody>
</table>
### Name and Residential Address

<table>
<thead>
<tr>
<th>First Name</th>
<th>Middle Name</th>
<th>Last Name</th>
<th>Occupation</th>
<th>Also Known As</th>
<th>Date of Birth</th>
<th>Title in applicant’s business</th>
<th>Address Line 1</th>
<th>Address Line 2</th>
<th>Address 3</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duane</td>
<td>Craig</td>
<td>McNight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gary</td>
<td>Allan</td>
<td>Sojka</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1335 Creek Rd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeffrey</td>
<td>H</td>
<td>Goldman</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Susan</td>
<td>Elizabeth</td>
<td>Schneider</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jennifer</td>
<td></td>
<td>Dooley</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name and Residential Address</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>First Name:</strong> Wendy</td>
<td><strong>Middle Name:</strong> Alison</td>
<td><strong>Last Name:</strong> Berger Shapiro</td>
<td><strong>Suffix:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in applicant’s business:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Also Known As:</strong></td>
<td><strong>Date of Birth:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong></td>
<td><strong>City:</strong></td>
<td><strong>State:</strong></td>
<td><strong>Zip Code:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong> N/A</td>
<td><strong>Email:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>First Name:</strong> Terrance</td>
<td><strong>Middle Name:</strong> William</td>
<td><strong>Last Name:</strong> Gainer</td>
<td><strong>Suffix:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in applicant’s business:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Also Known As:</strong></td>
<td><strong>Date of Birth:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong></td>
<td><strong>City:</strong></td>
<td><strong>State:</strong></td>
<td><strong>Zip Code:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong> N/A</td>
<td><strong>Email:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>First Name:</strong> Matthew</td>
<td><strong>Middle Name:</strong> C</td>
<td><strong>Last Name:</strong> Atwood</td>
<td><strong>Suffix:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in applicant’s business:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Also Known As:</strong></td>
<td><strong>Date of Birth:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong></td>
<td><strong>City:</strong></td>
<td><strong>State:</strong></td>
<td><strong>Zip Code:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong> N/A</td>
<td><strong>Email:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>First Name:</strong> Anthony</td>
<td><strong>Middle Name:</strong> Ray</td>
<td><strong>Last Name:</strong> Fritz</td>
<td><strong>Suffix:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in applicant’s business:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Also Known As:</strong></td>
<td><strong>Date of Birth:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong></td>
<td><strong>City:</strong></td>
<td><strong>State:</strong></td>
<td><strong>Zip Code:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong> N/A</td>
<td><strong>Email:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>First Name:</strong> Benjamin</td>
<td><strong>Middle Name:</strong> Gage</td>
<td><strong>Last Name:</strong> Koppel</td>
<td><strong>Suffix:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in applicant’s business:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Also Known As:</strong></td>
<td><strong>Date of Birth:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong></td>
<td><strong>City:</strong></td>
<td><strong>State:</strong></td>
<td><strong>Zip Code:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong> N/A</td>
<td><strong>Email:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name and Residential Address</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>First Name:</strong> Matthew <strong>Middle Name:</strong> Gerard <strong>Last Name:</strong> Bickel <strong>Suffix:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong> [Redacted] <strong>Title in applicant’s business:</strong> [Redacted] <strong>Also Known As:</strong> [Redacted] <strong>Date of Birth:</strong> [Redacted] <strong>Address Line 1:</strong> [Redacted] <strong>Address Line 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong> [Redacted] <strong>City:</strong> [Redacted] <strong>State:</strong> [Redacted] <strong>Zip Code:</strong> [Redacted] <strong>Phone:</strong> [Redacted] <strong>Fax:</strong> N/A <strong>Email:</strong> [Redacted]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Dina <strong>Middle Name:</strong>  <strong>Last Name:</strong> Rollman <strong>Suffix:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong> [Redacted] <strong>Title in applicant’s business:</strong> [Redacted] <strong>Also Known As:</strong> [Redacted] <strong>Date of Birth:</strong> [Redacted] <strong>Address Line 1:</strong> [Redacted] <strong>Address Line 2:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong> [Redacted] <strong>City:</strong> [Redacted] <strong>State:</strong> [Redacted] <strong>Zip Code:</strong> [Redacted] <strong>Phone:</strong> [Redacted] <strong>Fax:</strong> N/A <strong>Email:</strong> [Redacted]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Jason <strong>Middle Name:</strong> Mark <strong>Last Name:</strong> Divelbiss <strong>Suffix:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong> [Redacted] <strong>Title in applicant’s business:</strong> [Redacted] <strong>Also Known As:</strong> [Redacted] <strong>Date of Birth:</strong> [Redacted] <strong>Address Line 1:</strong> [Redacted] <strong>Address Line 2:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong> [Redacted] <strong>City:</strong> [Redacted] <strong>State:</strong> [Redacted] <strong>Zip Code:</strong> [Redacted] <strong>Phone:</strong> [Redacted] <strong>Fax:</strong> N/A <strong>Email:</strong> [Redacted]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> John <strong>Middle Name:</strong> R <strong>Last Name:</strong> Sweeney <strong>Suffix:</strong> III</td>
<td></td>
</tr>
<tr>
<td><strong>Occupation:</strong> [Redacted] <strong>Title in applicant’s business:</strong> [Redacted] <strong>Also Known As:</strong> [Redacted] <strong>Date of Birth:</strong> [Redacted] <strong>Address Line 1:</strong> [Redacted] <strong>Address Line 2:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Address 3:</strong> [Redacted] <strong>City:</strong> [Redacted] <strong>State:</strong> [Redacted] <strong>Zip Code:</strong> [Redacted] <strong>Phone:</strong> [Redacted] <strong>Fax:</strong> N/A <strong>Email:</strong> [Redacted]</td>
<td></td>
</tr>
</tbody>
</table>
**PRINCIPALS, FINANCIAL BACKERS, AND OPERATORS (CONTD.)**

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Shariah</td>
<td><strong>Middle Name:</strong></td>
</tr>
<tr>
<td><strong>Last Name:</strong> Brown</td>
<td><strong>Suffix:</strong></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in applicant’s business:</strong></td>
</tr>
<tr>
<td><strong>Also Known As:</strong></td>
<td><strong>Date of Birth:</strong></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
</tr>
<tr>
<td><strong>Address 3:</strong></td>
<td><strong>City:</strong></td>
</tr>
<tr>
<td><strong>State:</strong></td>
<td><strong>Zip Code:</strong></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong> N/A</td>
</tr>
<tr>
<td><strong>Email:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Sarah</td>
<td><strong>Middle Name:</strong> Elizabeth</td>
</tr>
<tr>
<td><strong>Last Name:</strong> Mejia</td>
<td><strong>Suffix:</strong></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in applicant’s business:</strong></td>
</tr>
<tr>
<td><strong>Also Known As:</strong></td>
<td><strong>Date of Birth:</strong></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
</tr>
<tr>
<td><strong>Address 3:</strong></td>
<td><strong>City:</strong></td>
</tr>
<tr>
<td><strong>State:</strong></td>
<td><strong>Zip Code:</strong></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong> N/A</td>
</tr>
<tr>
<td><strong>Email:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name and Residential Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Name:</strong> Shanika</td>
<td><strong>Middle Name:</strong> Robbie</td>
</tr>
<tr>
<td><strong>Last Name:</strong> Guthrie</td>
<td><strong>Suffix:</strong></td>
</tr>
<tr>
<td><strong>Occupation:</strong></td>
<td><strong>Title in applicant’s business:</strong></td>
</tr>
<tr>
<td><strong>Also Known As:</strong></td>
<td><strong>Date of Birth:</strong></td>
</tr>
<tr>
<td><strong>Address Line 1:</strong></td>
<td><strong>Address Line 2:</strong></td>
</tr>
<tr>
<td><strong>Address 3:</strong></td>
<td><strong>City:</strong></td>
</tr>
<tr>
<td><strong>State:</strong></td>
<td><strong>Zip Code:</strong></td>
</tr>
<tr>
<td><strong>Phone:</strong></td>
<td><strong>Fax:</strong> N/A</td>
</tr>
<tr>
<td><strong>Email:</strong></td>
<td></td>
</tr>
</tbody>
</table>
### A. PLEASE PROVIDE A DESCRIPTION OF THE DUTIES, RESPONSIBILITIES, AND ROLES OF EACH PRINCIPAL, OPERATOR AND EMPLOYEE

The following positions were included in Section 9: Board Chair, Board Member, CEO, President and Chief Diversity and Outreach Officer, General Counsel/Chief Compliance Officer, Chief of Security, Chief of Staff, and Associate General Counsel.

9. **Diversity Program Manager**: Develops, implements and monitors the programs that promote diversity within GTI, including GTI’s Affirmative Action Plan as outlined in its Diversity Plan; Develops trainings and initiatives to onboard and retain a diverse team; Works alongside HR on quantifying and reporting GTI’s diversity metrics; Works with the local community to develop job fairs and publicize GTI’s employment opportunities to diverse candidates; Engages local minority organizations to spread word about GTI’s employment opportunities; Continuously communicates with employees to understand and track levels of engagement, inclusion and happiness; Advises GTI on engaging with the diverse community to create job opportunities; Ensures GTI is meeting its diversity inclusion goals through tactics that align with the evolving needs of the community.

10. **Community Impact Manager**: Works with GTI’s internal team and the Community Advisory Board to facilitate partnerships and alliances with local individuals and groups; Researches companies and organizations for partnerships and develops relationship opportunities; Works with organizations and neighborhoods in the community to meet the needs of the diverse population; Speaks publicly at events on behalf of GTI; Monitors GTI’s progress in community relations; Collaborates with HR and GTI’s Diversity Program Manager; Plans community events with GTI’s Community Engagement Manager.

11. **Market CFO**: Develops and directs financial strategies to evaluate GTI’s fiscal performance; Works with CEO and President on long range planning; Forms and fosters relationships with local banks; Reports on budgets, financial reports and financial trends; Develops and implements GTI’s financial policies and procedures; Provide technical financial advice and knowledge to others; Provides strategic financial input and leadership on decision making issues affecting GTI; Develops a reliable cash flow projection process and reporting mechanism; Assists negotiating contracts’ financial and business terms.

12. **Controller**: Reports to the Market CFO; Prepares monthly financial reports; Oversees market-wide accounting activities and resources; Manages the market’s accounts payable and accounts receivable activities; Assures corporate income tax compliance to assure the accurate and timely completion of all corporate income tax returns taking full advantage of all favorable tax codes; Establishes and maintains accounting systems and controls; Responds to CFO as assigned with accurate and timely work to facilitate the market’s financial needs; Compiles financial reports as requested by President and Market CFO.

13. **Chief Medical Officer**: Develops and implements policies and procedures related to patient care including privacy, product testing and sanitation; Educates physicians and patients in the community on the benefits of medical marijuana; Advises on quality assurance and quality control; Works alongside GTI’s executive team to communicate with
Pennsylvania’s Department of Health; Conducts compliance trainings and inspections; Trains team members on medical-related protocols; Advises GTI on developing and implementing a patient education program; Supports corporate counsel in risk management and contract evaluation; Develops and maintains relationships with academic institutions for the purposes of business and research collaboration.

14. Deputy Security Officer (also known as Security Manager): Works on-site to execute on GTI's security plan on behalf of the Chief of Security; Responsible on-site physical site safety and security; Responsible on-site information safety and security; Trains all new employees on security, including HIPAA policies and procedures; Leads ongoing security training for employees; Changes alarms, access codes, password, etc. upon employee terminations and departures; Carries out the facility's security goals; Executes GTI's security procedures including asset protection, workplace violence prevention, diversion prevention, access control systems, video surveillance, etc.; Maintains relationships with local, state and federal law enforcement and other related government agencies; Works with Human Resources to create incident reports if a safety issue occurs on site; Works with outside consultants to schedule security audits; Maintains relationships with local law enforcement.

15. HR and Culture: Complies with all legal requirements and government reporting regulations affecting human resources functions; Recruits, interviews, tests and selects employees to fill vacant positions; Takes all new employees through GTI's onboarding program; Works with Chief Diversity and Outreach officer and Diversity team to executive GTI's Diversity Plan; Oversees and maintains employee personnel files; Administers performance review and salary administration programs to ensure compliance and equity across the organization; Administers benefit programs such as life health, dental, FMLA and employee assistance; Conducts wage surveys; Investigates and reports on any on-site accidents; Prepares employee separation notices and conducts exit interviews; Manages GTI’s culture program; Organizes team events; Works with the Diversity and Inclusion Manager to ensure a comfortable, welcoming environment for all employees.

16. Marketing and Branding: Develops and directs annual marketing plan and goals in support of GTI’s strategy and objectives; Coordinates marketing plan with executives and sales team; Provides leadership and support for the design, development and implementation of GTI’s products and service lines; Leads market research, competitive analyses and retention monitoring processes and initiatives; Manages the development and distribution of all marketing collateral; Provides leadership, direction and management of the market research function; Creates an institutional and system-wide marketing reporting function that can track, measure and analyze performance; Ensures all marketing communications are coordinated, support marketing plan objectives and are an effective expenditure of resources; Provides marketing skills and expertise to the company by building, developing and managing a marketing team capable of carrying out the necessary marketing strategies and tactics; Prepares presentations to explain the company’s current and future strategies.
17. **Strategy and Public Relations**: Develops effective communication plans; Develops, integrates, and implements PR activities designed to enhance GTI’s brand; Cultivates and maintains strong media relationships; Advances company's position with relevant constituents; Develops integrated communications products including website, print publications, newsletters, online communications, media and public relations; Creates and launches new media and marketing; Works with the Chief of Staff, VP of Marketing and CEO to achieve organizational goals and objectives by administering the communications and public relations initiatives as determined by the larger organizational strategic planning process; Evaluates an integrated strategic communications plan to advance the company's brand identity and broaden awareness of its programs and priorities; Refines company's core messages to ensure brand consistency; Resolves public affairs issues; Serves as executive editor for the development, production and maintenance of the company's internal and external communication vehicles, including the main website, marketing materials, publications, newsletters, invitations, flyers, advertisements, and annual reports; Enhances meaningful relationships with targeted, high-level external audiences; Researches and analyzes target markets to develop strategic and tactical publicity plans to grow the business; Develops pricing strategies and media relations plan, balancing firm objectives and customer satisfaction.

18. **Grow/Processing GM (also known as Cultivation GM)**: Oversees all aspects of GTI’s cultivation facility; Exercises authority and direction concerning all cultivation operational issues; Participates in developing and implementing facility’s rules, regulations, policies, and procedures; Manages, supervises and directs the activities of staff and function; Makes recommendations and decisions regarding hiring, discipline, termination or advancement of employees; Holds employees accountable for performance while making tough decisions regarding performance-related issues; Addresses poor performance; Shares responsibility with GTI Corporate to understand and be responsible for compliance in all areas of the cultivation operation; Utilizes labor force effectively to meet operating budgets; Ensures compliance with local, state, and federal billing or licensing requirements; Ensures accurate data entry into the inventory tracking systems; Required to be on-call and to respond to emergency situations at any time. This may include scheduling issues, potentially covering a vacant shift, facility issues and/or human resources requirements; Reviews current systems for operational efficiency; Abides by and enforces GTI’s safety and security regulations.

19. **Director of Facilities Operations**: Directs all administrative operations of the cultivation facility, including overseeing the overall health and wellness of the facility; Oversees the following departments: Security, facilities management, administration, human resources, diversity inclusion, engineering and IT; Oversees the coordination of building space allocation and layout, communication services, and facility expansion; Plans budgets and schedules facility modifications, including cost estimates; Manages non-cultivation shipping and receiving; Manages the telecommunication function; Develops and administers the annual budget; Works with GTI’s controller to pay all vendor bills and utilities payment.
20. Director of Human Resources, Diversity and Administration:  Complies with all legal requirements and government reporting regulations affecting human resources functions; Recruits, interviews, tests and selects employees to fill vacant positions; Works with GTI’s Diversity Program Manager, Chief of Staff and Corporate HR to set and implement diversity goals based on the company’s Diversity Inclusion plan and community demographics; Takes all new employees through GTI’s onboarding program; Oversees and maintains the facility’s personnel files; Reports employee metrics, including diversity metrics, to Corporate HR; Administers performance review and salary administration programs to ensure compliance and equity across the organization; Administers benefit programs such as life health, dental, FMLA and employee assistance; Conducts wage surveys; Investigates and reports on any on-site accidents; Prepares employee separation notices and conducts exit interviews; Organizes facility events; Works with the Diversity Program Manager to ensure a comfortable, welcoming environment for all employees.

21. Facilities and Engineering Manager: Initiates planned maintenance programs for a variety of office equipment; Oversees the cleaning and maintenance of facility; Works alongside the Director of Facilities Operations to manage third party vendors including waste removal (non-marijuana), snow removal, building maintenance, etc.; Manages preventive maintenance of facility equipment, including HVAC and office equipment; Oversees the parking lot maintenance; Works alongside the Director of Facilities Operations to plan budgets and schedules facility modifications, including cost estimates; Manages construction, maintenance and installation as needed; Initiates planned maintenance programs for a variety of office equipment; Manages the telecommunication function; Oversees the cleaning and maintenance of facility.

22. IT Manager: Coordinates all IT-related activities; Oversees and maintains the health and wellness of GTI’s technology; Trains and educates all employees on using IT hardware and software; Manages computer operations; Constantly communicates with IT vendors and consultants to ensure ongoing support of GTI’s infrastructure; Generates weekly IT reports for the VP of Cultivation; Works with Controller and VP of Cultivation to develop and manage IT budget; Analyzes the facility’s IT needs and recommends technical solutions; Creates and enforces GTI’s technical procedures; Produces rollout plan for changes to IT hardware and/or software; Performs preventative maintenance and testing on all hardware/software; Works with VP of Cultivation to secure and maintain IT vendor relationships.
23. **Cultivation Manager (a/k/a Master Grower):** Oversees all medical marijuana grow operations including propagation, grow, harvest and sanitation; Oversees the management of grow schedules, personnel and quality assurance practices; Monitors all environmental systems of GTI’s grow operations; Works with the propagation, grow, harvest and sanitation team leads to oversee team and individual performance, including twice-yearly employee reviews; Maximizes operational safety and efficiency through continuous improvement techniques; Maintains cultivation supplies and equipment inventory; Develops informational tools to monitor actual production and all things that influence production on a batch-by-batch basis, as well as a room-by-room basis; Tends to the needs of the plants regarding illumination, watering, nutrients, pruning, training, and pest and disease control; Manages efforts required for the germination and cloning of plants; Directs and assist with harvesting, drying, and curing; Performs regular physical inventory reconciliations to inventor records; Keeps the facility in a clean and orderly manner at all times; Prepares performance reports for the General Manager; Assists with preparation of operating budgets.

24. **Propagation Manager:** Responsible for coordinating and implementing activities related to mother, clone or vegetation stages of plant life and tending to early-stage cloning and plant care-taking; Cuts clones and monitors root growth on clone; Pots rooted clones; Manages seed germination; Monitors environmental parameters; Monitor for molds and pests; Checks and maintains water filters; Coordinates and implements activities related to mother, clone or vegetation stages of plant life; Plans, organizes and leads gardening team by identifying goals, objectives, methods, resources, scheduling, and routes of communication needed to carry out responsibilities.

25. **Grow Manager:** Manages all of GTI’s grow efforts including planting, pruning, fertilizing, thinning, watering and harvesting of plants; Oversees the maintenance, improvement, and repair of GTI’s propagation facilities, workspaces and equipment; Assists with recruitment, training, supervision, and evaluation of the grow staff; Develops and directs GTI’s grow policies and procedures; Leads implementation of cutting edge growing practices, techniques, and equipment; Works with the Cultivation Manager to continuously improve grow operations; Coordinates growing activities with the Lab & Processing and Logistics departments; Maintain proper records and reporting of data; Ensures implementation and adherence to quality, health, and safety procedures; Ensures organization and proper storage of all tools and equipment parts; Oversees and ensures proper irrigation and drainage; Assists GTI’s compliance team with recalls, compliance issues and inspections; Assists with product recalls.

26. **Harvest Manager:** Oversees harvesting and trimming mature plants; Manages the harvest team members and all aspects of the harvest process; Works closely with the grow team to ensure efficient, process-oriented transition from grow to harvest; Accurately weighs and reports on all plants in compliance with the state regulations and GTI’s standard operating procedures; Follows best practices to handle the physical plant as little as possible.
27. **Sanitation Manager:** Oversees the facility’s sanitation and waste management programs; Works with the Facilities and Engineering Manager to coordinate waste removal; Monitors sanitation performance and ensures adherence to state’s sanitation regulations; Prepares sanitation reports and delivers them to the Cultivation Manager and Grow/Process Manager; Continuously improves waste removal program to increase efficiencies; Works with management to train employees on proper sanitation procedures; Frequently audits the facility to ensure it is in compliance with state regulations and Standard Operating Procedures; Oversees sanitation team; Coordinates facility cleaning with the Facilities and Engineering Manager.

28. **Grow Laborers:** Grow laborers are cross-trained on all the functions within GTI’s grow team (propagation, grow, harvest and sanitation); Abides by all policies and procedures set forth by the Cultivation Manager; Maintains production records; Participates in production activities at all stages of grow (propagation, grow, harvest and sanitation) as instructed by the Cultivation Manager; Responsible for implementing actions to achieve production goals.

29. **Lab and Processing Manager:** Develops and directs GTI’s Lab & Processing policies and procedures; Leads implementation of cutting lab and processing practices, techniques, and equipment; Works with Grow/Process GM to continuously improve grow operations; Maintains employee scheduling; Plans, organizes and directs medical marijuana extraction processes and procedures; Oversees and minimizes manufacturing costs through effective utilization of labor, equipment and materials; Implements laboratory strategies and action plans to ensure that the facility supports the company's strategic initiatives; Manages the entire lab and processing team, including the laborers; Controls extraction inventory; Oversees recordkeeping and product tracking.

30. **Lab Director:** Ensures the Lab Department meets the production demand quantity and quality for dispensaries in accordance with GTI’s goals; Plans, organizes and directs the extraction derivative marijuana product manufacturing and production operations; Assigns work to Lab team, including extraction, inventory tracking of all processing material, maintaining, cleaning and servicing laboratory equipment as required by procedures and manufacturer specifications; Addresses performance-related issues; Ensures all Standard Operating Procedures, state regulations and safety protocols are followed throughout all lab procedures.

31. **Pre-Extraction Lab Technician:** After harvesting is complete, prepares plant matter for extraction; Weighs cuts, trims and grinds the plant into homogenous sizes before extraction; Ensures conditions are optimal for extraction, including lab temperature and humidity.

32. **Post-Extraction Lab Technician:** Handles product post-extraction and pre-process; Responsible for preparing the product to be processed and turned into usable product; Tasks include: Whipping, using the vacuum oven, roto; Oversees fractional distillation; Separation of cannabinoids.

33. **Lab Laborer:** Lab laborer are cross-trained on all the functions within GTI’s Lab team (Pre-extraction, Post-Extraction); Abide by all policies and procedures set forth by the Lab Director; Maintain production records; Participate in production activities at all stages of extraction as instructed by the Lab Manager; Responsible for implementing actions to achieve production goals.
### 34. Process and Product Director:
Oversees all processes and procedures of turning the extracted product into GTI’s various medical marijuana products; Manages lab and kitchen equipment needed for product manufacturing; Ability to work effectively with employees, management, customers, governmental agencies, community members and the general public; Compliance with typical laboratory standards; Familiarity with OSHA guidelines for dealing with hazardous chemicals; Ability to research, evaluate and adapt to new methods, compliance updates and techniques for operational improvement; Documents and continually develops changing internal processes for MIP department; Reviews training procedures and seek continued education to ensure delivery on all job functions; Initiates, plans, processes and minimizes manufacturing costs through effective utilization of manpower, equipment, facilities, materials, and capital; Encourages use of new techniques and focus on fact-based problem solving; Handles batch tracking and record keeping.

### 35. Mary’s Manager:
Responsible for overseeing the development of Mary’s Medicinals products; Ensures the entire Mary’s team is following Standard Operations Procedures and staying in compliance with state regulations and safety protocols; Minimizes manufacturing costs through effective utilization of manpower, equipment, facilities, materials, and capital; Assures attainment of business objectives and production schedules while ensuring product standards that exceeds customers’ expectations; Implements manufacturing strategies and action plans to ensure that the facility supports the company's strategic initiatives; Establishes group and individual accountabilities throughout assigned departments for problem solving and cost reduction, both on a permanent and ad-hoc basis, depending on need; Encourages use of new techniques and focus on fact-based problem; Assigns work to Lab team, including inventory tracking of all product, maintaining, cleaning and servicing equipment as required by procedures and manufacturer specifications; Works with VP of Operations to manage the daily Lab processes, including: supply ordering, inventory oversight and management.

### 36. Vaporizer Pen Cartridges Manager:
Responsible for overseeing the development of GTI's vaporizer pen cartridges; Ensures the entire team is following Standard Operations Procedures and staying in compliance with state regulations and safety protocols; Works, initiates, plans, processes and minimizes manufacturing costs through effective utilization of manpower, equipment, facilities, materials, and capital; Maintains a sanitized and organized lab; Assures attainment of business objectives and production schedules while insuring product standards that exceeds customers' expectation; Implements manufacturing strategies and action plans to ensure that the facility supports the company's strategic initiatives; Establish group and individual accountabilities throughout assigned departments for problem solving and cost reduction, both on a permanent and ad-hoc basis, depending on need; Encourage use of new techniques and focus on fact-based problem; Assign work to Lab team, including inventory tracking of all product, maintaining, cleaning and servicing equipment as required by procedures and manufacturer specifications; Work with VP of Operations to manage the daily Lab processes, including: supply ordering, inventory oversight and management.
### 37. Packaging & Labeling Agent
Oversees GTI’s packaging and labeling processes, both manual and machine related tasks; Covers and packs the ready products in child-resistant and tamperproof packaging such that no single unit contains more than the designated supply of medical marijuana; Ensures proper labeling based on GTI’s Standard Operating Procedures and state regulations; Oversees inventory for all packaging materials; Oversees packaging and labeling process, ensuring containers protect the contents from contamination and do not impart any toxic or deleterious substances to the medical marijuana product.

### 38. Process and Product Laborers
Process and Product laborers are cross-trained on all the functions within GTI’s Process & Product team (Mary’s Medicinals, vaporizer pen cartridges, and packaging and labeling); Abides by all policies and procedures set forth by the Process & Product Director; Maintains production records; Participates in production activities at all stages of Process & Product (Mary’s Medicinals, vaporizer pen cartridges, and packaging and labeling) as instructed by the Process & Product Director; Implements actions to achieve production goals.

### 39. Logistics Manager
Oversees logistics across the facility including transportation, quality assurance, picking and packing; Ensures products are packed and shipped on time; Ensures all the details of shipments are handled properly this includes pick/pack/ship; Transportation schedules and fleet coordination delivery follow up QC; Supply chain and fulfillment as needed; Coordinates shipments to labs for testing.

### 40. Picking Manager
Fills dispensary orders; Picks orders from final product based on the orders placed by dispensaries; informs Logistics manager if/when inventory is low; Ensures all labels match product and purchase orders; Quality checks all packaging; Ensures quantities and SKUs match the orders placed by dispensaries.

### 41. Packing Manager
Takes final product from Lab and Processing and puts it into safe, compliant, transportable packaging; Responsible for overseeing packaging inventory including child-proof, tamper-resistant sleeves, bags, drams and shipping containers; Tracks product as it is transported and prepared to leave the facility.

### 42. Quality Assurance/Quality Control Manager
Makes sure GTI fulfills its promise of providing high quality, safe and correct product to dispensaries and patients; Continuously audits facility to ensure high quality, safe product is being grown and manufactured; Weighs, measures and tests products; Ensures lab results match product; Conducts random sampling tests to ensure product looks right, smells right and is packaged right; Quantifies and tracks test results.
### 43. Transportation Manager:
Arranges transportation schedules including drop off; Works with the Logistics team to ensure product is ready for pickup; Coordinates deliveries with security teams and third-party transportation companies.

### 44. Logistics Laborer:
Logistic laborers are cross-trained on all the functions within GTI’s Logistics team (Picking, Packing, Quality Assurance/Quality Control, and Transportation); Abide by all policies and procedures set forth by the Logistics Manager; Maintain logistics records; Participate in logistics activities at all stages of logistics as instructed by the Logistics Manager; Responsible for implementing actions to achieve production goals.

### 45. VP of Good Manufacturing Practices:
Responsible for the coordination of work to ensure the successful completion of production schedules and shipments in pursuance of business goals; Works closely with Logistics and Lab and Processing to ensure patient orders are met within the given timeframe; Through the effective management of targets, goals and production efficiencies, ensures the ongoing success of the production team; Improves throughput and other in-house processes with the objective of reducing overall costs and enhancing patient satisfaction.

### B. PLEASE DESCRIBE THE EMPLOYEE QUALIFICATIONS OF EACH PRINCIPAL AND EMPLOYEE.

The following positions were included in Section 9: Board Chair, Board Member, CEO, President and Chief Diversity and Outreach Officer, General Counsel/Chief Compliance Officer, Chief of Security, Chief of Staff, and Associate General Counsel.

#### 9. Diversity Program Manager:

#### 10. Community Impact Manager:

#### 11. Market CFO:

#### 12. Controller:

#### 13. Chief Medical Officer:
<table>
<thead>
<tr>
<th>14. Deputy Security Officer (also known as Security Manager):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>15. HR and Culture:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>16. Marketing and Branding:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>17. Strategy and Public Relations:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>18. Grow/Processing GM (also known as Cultivation GM):</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>19. Director of Facilities Operations:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>20. Director of Human Resources, Diversity and Administration:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>21. Facilities and Engineering Manager:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>22. IT Manager:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>23.</td>
</tr>
<tr>
<td>24.</td>
</tr>
<tr>
<td>25.</td>
</tr>
<tr>
<td>26.</td>
</tr>
<tr>
<td>27.</td>
</tr>
<tr>
<td>28.</td>
</tr>
<tr>
<td>29.</td>
</tr>
<tr>
<td>30.</td>
</tr>
<tr>
<td>31.</td>
</tr>
<tr>
<td>32.</td>
</tr>
<tr>
<td>Number</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>33</td>
</tr>
<tr>
<td>34</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>36</td>
</tr>
<tr>
<td>37</td>
</tr>
<tr>
<td>38</td>
</tr>
<tr>
<td>39</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>41</td>
</tr>
<tr>
<td>42</td>
</tr>
<tr>
<td>43</td>
</tr>
<tr>
<td>44</td>
</tr>
<tr>
<td>45</td>
</tr>
</tbody>
</table>