



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

June 10, 2016

Olav Messerschmidt
Registration Agent for Terramera, Inc.
c/o OMC Ag Consulting, Inc.
828 Tanglewood Lane
East Lansing, MI 48823

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling and Formulation
Amendment – Acceptable Addition of Label Claims and Use Sites and Acceptable
Revision of Basic Formulation and Addition of Alternate Formulation
Product Name: Plasma Neem Oil EC, Biological Insecticide
EPA Registration Number: 88760-5
Application Date: May 19, 2016
OPP Decision Number: 517950

Dear Mr. Messerschmidt:

The amended labeling and Confidential Statements of Formula (CSFs) referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, are acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

Please note that the record for this product currently contains the following acceptable CSFs:

- Basic CSF dated 05/13/2016
- Alternate CSF #1 dated 05/13/2016

Any CSFs other than those listed above are superseded/no longer valid.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling

or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Andrew Reighart of my team by phone at (703) 347-0469 or via email at reighart.andrew@epa.gov.

Sincerely,



Andrew Bryceland, Team Leader
Biochemical Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure

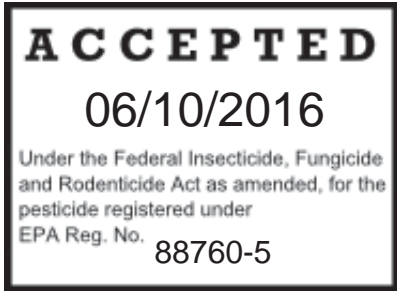
[Note: Texts in [] are optional language.]

Plasma Neem® Oil EC (EPA Reg. No. 88760-5)
MASTER LABEL
Sublabel A is for Agricultural Use
Sublabel B is for Residential Use

Plasma Neem® Oil EC
Biological Insecticide [Fungicide] [Nematicide]
[Miticide]
[Alternate Brand Name: TerraNeem™ EC]

**[Anti-Feedant, Insect Repellent, Insect Growth Regulator,
Mycelial Growth Inhibition]**

*For Crop and Use on Other Plants
including vegetables, fruits, citrus, nuts, [and] ornamental plants, and other plants*



Active Ingredient:	
Cold Pressed Neem Oil.....	84.9%
Other Ingredients	<u>15.1%</u>
Total	100.0%

[Contains azadirachtin at 3183 ppm]

KEEP OUT OF REACH OF CHILDREN
CAUTION

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

Shake Well Before Use

NET CONTENTS: 8 FL. OZ. to 275 GALLONS

EPA Reg. No. 88760-5
EPA Est. No. 49292-WA-001

Batch No.

Manufactured by:
Terramera, Inc.
6920 Salashan Pkwy D-109
Ferndale, WA 98248

[Note: Texts in [] are optional language.]

Plasma Neem® Oil (EPA Reg. No. 88760-5)
Sublabel A: Agricultural Use

Plasma Neem® Oil EC

[Alternate Brand Name: TerraNeem™ EC]

**Biological Insecticide [/Fungicide] [/Nematicide] [/Miticide]
[Anti-Feedant, Insect Repellent, Insect Growth Regulator,
Mycelial Growth Inhibition]**

*For Crop and Use on Other Plants
including vegetables, fruits, citrus, nuts, [and] ornamental plants, and other plants*



Active Ingredient:

Cold Pressed Neem Oil.....	84.9%
Other Ingredients	<u>15.1%</u>
Total	100.0%

[Contains azadirachtin at 3183 ppm]

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

Shake Well Before Use

[See label booklet for additional precautionary statements, directions for use, storage and disposal statements, and warranty.]

NET CONTENTS: 8 FL. OZ. to 275 GALLONS

EPA Reg. No. 88760-5
EPA Est. No. 49292-WA-001

Batch No.

Manufactured by:
Terramera, Inc.
6920 Salashan Pkwy D-109
Ferndale, WA 98248

[Note: Texts in [] are optional language.]

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions are available, wash with detergent and hot water. Keep and store PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 (40CFR170.240(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 break-down.

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 high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

PHYSICAL AND CHEMICAL HAZARDS

Flammable. Keep away from heat and open flame.

USER SAFETY RECOMMENDATIONS

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if contaminated with pesticide. 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.

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 protected handlers may be in the area during product application. For any requirements specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation.

[Note: Texts in [] are optional language.]

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 (WPS).

Do not enter or allow 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:

- Long-sleeved shirt and long pants
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

These requirements apply to uses of this product that are NOT within the scope of the 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 treated areas without protective clothing until sprays have dried

PRODUCT MODE OF ACTION

Plasma Neem® Oil EC controls target pests primarily by ingestion and also by contact. The modes of action on insects are repellence, anti-feeding action and interference with the molting process. **Plasma Neem® Oil EC** controls target diseases by inhibiting mycelial growth.

GENERAL INFORMATION

Read all directions before using this product.

Apply **Plasma Neem® Oil EC** as directed to any food or non-food crop up to and including the day of harvest. In most cases, use a concentration of 0.6% Plasma Neem EC. In case of severe infestation and fungicide use, use a 1.3% concentration of Plasma Neem EC. Use a maximum rate of 5 pints **Plasma Neem® Oil EC**/acre for insecticide and miticide use and 5 quarts **Plasma Neem® Oil EC**/acre for fungicide use. Refer to the Mixing and Application Instructions for mixing and rate instructions and to Use Site Section for a complete listing of crops.

[Note: Texts in [] are optional language.]

MIXING

Plasma Neem® Oil EC is an emulsifiable concentrate and requires only water for the appropriate use dilution. Additional surfactant is not required. Shake the container well before use.

Add the **Plasma Neem® Oil EC** to a mixing tank with a little water and agitate. Neem oil can solidify at temperatures below 59°F. If solidified, thaw the product by setting out in temperatures over 80°F and agitating well before mixing with water. For optimal emulsion, do not use cold water (less than 45°F). Then add remaining water to the spray tank with continuous agitation.

Applying the product immediately after preparation assures that it is in suspension. To prevent separation of the emulsion, mix thoroughly and continue agitation while spraying. Non-uniform mixing can cause crop injury or result in lowered effectiveness. For tank mixtures add components to the tank containing the **Plasma Neem® Oil EC spray** mixture and agitate thoroughly. If tank mixture is allowed to sit, agitation is necessary prior to application. Adjusting the spray mixture pH between 5.5 and 7.0 will provide optimal performance. Always use this product promptly after mixing with water and do not let tank mix sit for any extended period.

COMPATIBILITY: **Plasma Neem® Oil EC** is best applied independently but has been found to be compatible with tank mixes including liquid fertilizers such as fish emulsion and adjuvants like karanja oil, cottonseed oil, sesame oil and castor oil. 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. Check compatibility by using the correct proportion of the products in a small test container. Test the tank-mix combinations for possible adverse effects (such as settling out, flocculation, etc.) and for potential phytotoxic effects on a small sample of plants prior to use. As environmental conditions can alter the interactions between compounds, in order to test for compatibility a test shall be conducted for both new and previously used combinations. Avoid mixtures of several materials and very concentrated spray mixtures.

Do not use the combination if a uniform, milky emulsion is not formed. Adjust with addition of warm water or more emulsifier and agitate before use.

DO NOT apply sulfur or sulfur containing products within 14 days of a **Plasma Neem® Oil EC** application. **Plasma Neem® Oil EC** may not be compatible with deltamethrin formulations such as Decis®.

PHYTOTOXICITY: When used according to label instructions, **Plasma Neem® Oil EC** has been evaluated for phytotoxicity on a wide range of crops and ornamentals. However, it is recommended that testing of a small portion of the area to be treated for phytotoxicity be conducted before treating the entire area. Apply foliar spray in conditions that favor fast drying. Further, all possible mixtures of pesticide sprays, other fertilizers, surfactants, adjuvants, have not been tested. Therefore, testing for phytotoxicity of spray mixtures is recommended. Spray equipment used to apply **Plasma**

[Note: Texts in [] are optional language.]

Neem® Oil EC must be thoroughly cleaned before use. Tank mix combinations of **Plasma Neem® Oil EC** may be incompatible with oil-based formulations.

APPLICATION INSTRUCTIONS

Apply **Plasma Neem® Oil EC** as a foliar spray or as soil drench to control pests. Use as a soil drench to control soil borne pests and larvae of pests. When applied as a soil drench, avoid excessive run off. **Plasma Neem® Oil EC** can also be applied through sub-surface soil treatment equipment. Always follow equipment manufacturer's use directions. **Plasma Neem® Oil EC** may be applied using any powered or manual pesticide application equipment which includes high volume, low volume, ultra-low volume, electrostatic, air blast and fogging. Follow the original manufacturer's instructions when using these types of equipment. When used as a foliar application, ensure thorough coverage of the plant surfaces, but avoid pooling or run off.

Avoid spraying under conditions of high humidity and high temperature (>90°F).

INSECTICIDE/MITICIDE/NEMATICIDE USE

Spray when the onset of insects (see Pest List) is expected or soon after insects are noticed. When used as a foliar application, spray diluted **Plasma Neem® Oil EC** in a suitable high volume sprayer with adequate spray pressure to ensure complete and thorough coverage of the plant surfaces. Ensure that both the top and bottom of leaves are wetted. For optimum results, repeat the applications at intervals of 7-10 days. Use higher rates and increase spray frequency when pest pressure is high. Spray early in the morning or in the evening for best results. Repeat application if it rains within four hours of spraying.

	Concentration	Rate	Spray Interval
Most pests and crop conditions	0.6% Plasma Neem® Oil EC	1-2 pints Plasma Neem Oil EC/acre	7-10 days
For severe infestation	1.3% Plasma Neem® Oil EC	5 pints Plasma Neem Oil EC/acre	

Root-dip Nematicide Use on Strawberries

For bare-root dip applications on strawberries use a concentration of 2% (e.g. 2 gallons of Plasma Neem® Oil EC in 100 gallons of water). If bare-root nursery plants are in cold storage, allow them to thaw to ambient temperature – approximately 20°C (70°F). Submerge the entire plant to be treated in **Plasma Neem® Oil EC** emulsion. Leave the plant completely submerged in for 15-30 minutes. Remove the plants from the treatment solution, shake off excess liquid, and drain for 5-15 min. Plant after treatment, or package the plants in suitable containers and cold store between -2°C and 5 °C (28-48 °F) during shipping and until planting.

[Note: Texts in [] are optional language.]

FUNGICIDE USE

Plasma Neem® Oil EC controls powdery mildew and Botrytis and suppresses stem mildew and sour rot on grapes. Do not apply with any sulfur or sulfur containing products within 14 days of a **Plasma Neem® Oil EC** application.

Disease	Concentration	Rate	Spray Interval
Powdery Mildew	1.3%	5 quarts Plasma Neem Oil EC/acre	10-14 days from pre-bloom through veraison
Botrytis			Spray at bloom, pre-bunch closure, veraison and 14 days after veraison

DILUTION TABLE

Gallons Water	Volume of Plasma Neem Oil EC		
	0.6% Concentration	1.3% Concentration	2.0% Concentration
25	1 ¼ pints	2 ½ pints	0.5 gallons (2 quarts)
50	2 ½ pints	5 pints	1 gallon
75	3 ¾ pints	7 ½ pints	1.5 gallons
100	5 pints	10 pints (5 quarts)	2 gallons

USE SITES

CROP USES – Use **Plasma Neem® Oil EC** on the following crops and crop groupings:

Alfalfa, Beans, Berries (including strawberries), Brassicas, Bulb Vegetables, Cereal Grains, Citrus fruits, Cole Crops, Cotton, Cucurbits, Fruits, Grapes, Herbs, Legumes (including soybeans), Leafy and Fruiting Vegetables, Peanuts, Roots and Tubers (including potatoes), Pome and Stone Fruits, Tobacco, Tree Nuts and Tropical Fruits.

USE on Other Plants – Use **Plasma Neem® Oil EC** on other sites including: ornamentals, nurseries, fencerows and turf including golf courses, parks, and other grass areas.

PESTS (INSECTS and DISEASES)

Use against the following pests:

<i>Aphids</i>	<i>Cotton Aphid, Cowpea Aphid, Mustard Aphid, Okra Aphid, Pea Aphid, Rice Aphid</i>
<i>Beetles</i>	<i>Brinjal (Egg Plant) Spotted Leaf Beetle, Chick Pea Beetle, Cow Pea Beetle, Colorado Potato Beetle, Cucumber Beetle, Mexican Bean Beetle, Radish Flea Beetle, Red Pumpkin Beetle, Spotted Cucumber Beetle, Soybean Japanese Beetle</i>
<i>Stink Bugs</i>	<i>Tomato Stink Bugs</i>

<i>Caterpillars</i>	<i>Black Headed Caterpillar, Cabbage Caterpillar, Ear Cutting Caterpillar, Tobacco Caterpillar, Yellow Hairy Caterpillar</i>
<i>Leafhoppers</i>	<i>Brown Plant Hopper, Carolina Grasshopper, Leafhopper, Potato Leafhopper, Rice Brown Plant Hopper, Rice Grasshopper, Rice Green Leafhopper, Grape Leafhopper</i>
<i>Leafminers</i>	<i>Leafminers of Ornamental Plants, Tomato Leafminer</i>
<i>Whiteflies</i>	<i>Cotton Whitefly, Sugarcane Whitefly, Banded Wing Whitefly, Citrus Whitefly</i>
<i>Mealy Bugs</i>	<i>Mealy Bugs of Ornamental Plants and Grapes</i>
<i>Midges</i>	<i>Brassica Pod Midge</i>
<i>Mites</i>	<i>Spider Mites</i>
<i>Nematodes</i>	<i>Root Knot Nematodes, [Soybean Cyst Nematodes*]</i>
<i>Weevils</i>	<i>Black Vine Weevil</i>
<i>Worms</i>	<i>Armyworms</i>
<i>Scales</i>	<i>California Red Scale, Yellow Scale, Coffee Green Scale</i>
<i>Thrips</i>	<i>Peanut Thrips, Grape Thrips</i>
<i>Diseases</i>	<i>Powdery Mildew, Stem Mildew, Botrytis, Sour Rot on Grapes</i>

[* Except in California]

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by pesticide storage or disposal.

PESTICIDE STORAGE: Do not store this product above 104°F or below 20°F for extended periods of time. Keep containers tightly closed and in original containers when not in use. Do not store exposed to ultraviolet light (sunlight) or moisture. Neem oil clouds and solidifies at temperatures below 59°F. If oil has solidified, gently thaw by exposing to temperatures over 80°F. Store in such a manner to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep container closed when not in use.

PESTICIDAL 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 DISPOSAL: Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available.

5-Gallon or Smaller Containers: 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.

Containers Larger than 5 Gallons: 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. 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.

NOTICE ON CONDITIONS OF SALE

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: 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. Crop 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 Seller. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Seller makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Seller is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Seller disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Seller election, the replacement of product.

[Terramera and TerraNeem are trademarks of Terramera, Inc.]

**Plasma Neem® Oil EC (EPA Reg. No. 88760-5)
Sublabel B: Residential Use**

Plasma Neem® Oil EC
**[Biological] Insecticide [/Fungicide] [/Nematicide]
[/Miticide]**

**[Anti-Feedant, Insect Repellent, Insect Growth Regulator,
Mycelial Growth Inhibition]**

*For Crop and Use on Other Plants
including vegetables, fruits, citrus, nuts, [and] ornamental plants, lawns and other
plants*



For Organic Gardening



Active Ingredient:

Cold Pressed Neem Oil..... 84.9%

Other Ingredients..... 15.1%

Total 100.0%

[Contains azadirachtin at 3183 ppm]

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

Shake Well Before Use

[See back label for additional precautionary statements, directions for use, storage and disposal statements, and warranty.]

NET CONTENTS: 3 FL. OZ. to 5 GALLONS

EPA Reg. No. 88760-5
EPA Est. No. 49292-WA-001

Batch No.

Manufactured by:
Terramera, Inc.
6920 Salashan Pkwy D-109
Ferndale, WA 98248

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

ENVIRONMENTAL HAZARDS

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

PHYSICAL AND CHEMICAL HAZARDS

Flammable. Keep away from heat and open flame.

DIRECTIONS FOR USE

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

GENERAL INFORMATION

Plasma Neem® Oil EC controls target insects on contact or by ingestion. The product acts on insects by way of repellence, anti-feedant action and interference with the molting process. Plasma Neem® Oil EC controls target diseases by inhibiting mycelial fungal growth. The buyer or user is reminded that the degree of efficacy of the product is largely dependent on weather conditions, intensity of pest population, area of application, type of pest, and physical stages of pests and crops.

Do not store this product above 104°F or below 20°F for extended periods of time. Keep containers tightly closed and in original containers when not in use. Do not store exposed to ultraviolet light (sunlight) or moisture.

THAWING (MELTING) INSTRUCTIONS

Neem oil clouds and solidifies at temperatures below 59°F. Thaw (melt) solidified or frozen oil by standing bottle in warm water. Make sure cap is tightly closed. Or set out in temps over 80°F. Avoid direct exposure to temperatures over 104°F.

Avoid spraying under conditions of high humidity and high temperature (>90°F). Make applications in early morning/late evening to minimize potential for plant injury.

MIXING INSTRUCTIONS

Plasma Neem® Oil EC contains cold pressed Neem Oil and requires only water for the appropriate use dilution. Add **Plasma Neem® Oil EC** to a mixing tank or spray bottle with a little water and agitate thoroughly. For optimal mixing, ensure water temperature is above 45°F. Then add remaining water to the spray tank or spray bottle with continuous agitation. Agitate continuously while spraying.

Crop Uses: Plasma Neem® Oil EC may be used on various plants including beans, berries, brassicas, bulb vegetables, corn, citrus trees, cole crops, cucurbits, herbs, fruit and nut trees, vegetables, roots and tubers, grass, lawns and ornamentals.

Use Rates: For best results, apply Plasma Neem® Oil EC at 0.6 – 1.3% (2.0% only for trees) in sufficient amounts of water to achieve complete coverage. **Plasma Neem® Oil EC** is most effective when applied before insects or eggs are present in large numbers. Repeat application every 7 to 14 days.

Spray Directions: Apply **Plasma Neem® Oil EC** as a foliar spray or as soil drench to control pests. Apply as a soil drench to control soil borne pests and larvae of pests. When applied as a soil drench, avoid excessive run off. When using as a foliar application, ensure thorough coverage of plant surfaces, but avoid pooling and run off.

To avoid potential leaf burn, apply the product in early morning or late evening. Test the product on a small portion of plants for compatibility before treating the entire plants.

Instructions for 1-Gallon Sprayer

Neem Oil EC Concentration	Fluid Ounces (oz) Neem Oil EC per Gallon Water	Tablespoons (approx.) per Gallon Water
0.6%	¾ fl. oz	1½ Tbsp
1.3%	1½ fl. oz	3 Tbsp
2.0% (trees only)	2½ fl. oz	5 Tbsp

Instructions for 32 oz. (1 Qt.) Spray Bottle

Concentration	Teaspoons (approx.) per 32 oz. (1 Qt) Water
0.6%	1¼ tsp (1/5 fl. oz.)
1.3%	2½ tsp (2/5 fl. oz.)
2.0% (trees only)	4 tsp (2/3 fl. oz.)

PESTS: Plasma Neem® Oil EC may be used against the following insects and diseases:

Aphids	Cotton Aphid, Cowpea Aphid, Mustard Aphid, Okra Aphid, Pea Aphid, Rice Aphid
Beetles	Brinjal (Egg Plant) Spotted Leaf Beetle, Chick Pea Beetle, Cow Pea Beetle, Colorado Potato Beetle, Cucumber Beetle, Mexican Bean Beetle, Radish Flea Beetle, Red Pumpkin Beetle, Spotted Cucumber Beetle, Soybean Japanese Beetle
Stink Bugs	Tomato Stink Bugs
Caterpillars	Black Headed Caterpillar, Cabbage Caterpillar, Ear Cutting Caterpillar, Tobacco Caterpillar, Yellow Hairy Caterpillar
Leafhoppers	Brown Plant Hopper, Carolina Grasshopper, Leafhopper, Potato Leafhopper, Rice Brown Plant Hopper, Rice Grasshopper, Rice Green Leafhopper, Grape Leafhopper
Leafminers	Leafminers of Ornamental Plants, Tomato Leafminer
Whiteflies	Cotton Whitefly, Sugarcane Whitefly, Banded Wing Whitefly, Citrus Whitefly
Mealy Bugs	Mealy Bugs of Ornamental Plants and Grapes

Midges	Brassica Pod Midge
Mites	Spider Mites
Nematodes	Root knot nematodes, [Soybean Cyst Nematodes*]
Weevils	Black Vine Weevil
Scales	California Red Scale, Yellow Scale, Coffee Green Scale
Thrips	Peanut Thrips, Grape Thrips
Diseases	Powdery Mildew, Stem Mildew, Botrytis, Sour Rot on Grapes

[* Except in California]

STORAGE AND DISPOSAL

Store in a cool dry place out of reach of children and pets and away from direct sunlight, windows, flames and other sources of heat or ignitions. Nonrefillable container. Do not reuse or refill this container. If empty: 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.

NOTICE: Research and testing have determined the “Directions for Use” are appropriate for the proper use of this product under expected conditions. To the extent consistent with applicable law, user assumes responsibility for the lack of performance or safety if not used as directed.

[Optional Marketing Claims]

- [Use] The Power of Neem
- [Cold Pressed] [Pure] Neem Oil
- Derived From Neem
- Plant-based [biopesticide] [spray]
- Botanical insecticide and fungicide
- Non-toxic [mode of] action
- Ready-to-Use [spray] [formula]
- Protect your plants from insects and diseases
- [4-in-1,] multi-purpose product – fungicide, insecticide, miticide and nematocide
- [For] Use as part of an Integrated Pest Management [program][strategy]
- Plasma Neem Oil EC is an effective biological fungicide, insecticide, miticide and nematocide for organic gardening use on vegetables, tree fruits, nuts and vines, citrus, ornamental flowers, shrubs and trees, grass lawns, and houseplants.
- For use on vegetables, [fruits,] [nuts,] [vines,] [citrus,] [ornamental plants,] [shrubs and trees,] [grass lawns,] [houseplants]
- [Also] controls aphids, [beetles,] [stink bugs,] [caterpillars,] [leafhoppers,] [leafminers,] [whiteflies,] [mealy bugs,] [midges,] [spider mites,] [nematodes,] [weevils,] [scales,] [and] [&] [thrips] [other listed insects and nematodes]
- Controls powdery mildew, botrytis, [stem mildew,] [and] [&] [sour rot]
- Use for the prevention and control of various fungal diseases such as powdery mildew, botrytis, stem mildew and others as listed on label.
- Can be applied up to day of harvest [as a [4 in 1,] multi-purpose product [– fungicide, insecticide, miticide and nematocide]]
- For use in and around home and home garden
- Peel Here for Directions & Precautions
- Concentrate
- [12 fl. oz. concentrate] [this bottle] makes up to 16 gallons
- [16 fl. oz. concentrate] [this bottle] makes up to 21 gallons
- [24 fl. oz. concentrate] [this bottle] makes up to 32 gallons
- [32 fl. oz. concentrate] [this bottle] makes up to 43 gallons
- [128 fl. oz. concentrate] [this jug] makes up to 172 gallons
- [320 fl. oz. concentrate] [this jug] makes up to 430 gallons