



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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

June 26, 2015

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

Subject: Labeling Notification per Pesticide Registration Notice (PRN) 98-10
New EPA Reg number, Terramera name and contact information, emergency telephone number
changed and added "TerraNeem Oil," as alternate brand name
Product Name: Plasma Neem Oil Biological Insecticide
EPA Registration Number: 88760-4
Application Date: 4/29/2015
OPP Decision Number: 503988

Dear Mr. Messerschmidt:

The U.S. Environmental Protection Agency (EPA) is in receipt of your application for notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Biopesticides and Pollution Prevention Division (BPPD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The labeling submitted with this application has been stamped "Notification" and will be placed in our records. The alternate brand name "TerraNeem Oil" has been added to the product's records. You must submit one (1) copy of the final printed labeling with the modifications.

If you have any questions, please contact Sandra Owusu-Ansah of my team by phone at (703) 347-0350 or via email at owusu-ansah.sandra@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Andrew C. Bryceland".

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

Enclosure

[Bracketed information is optional text.]

Plasma Neem® Oil (EPA Reg. No. ~~84185-488760-4~~)

MASTER LABEL

Sublabel A is for Agricultural Use

Sublabel B is for Residential Use

NOTIFICATION

88760-4

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

06/26/2015

Plasma Neem® Oil

BIOLOGICAL INSECTICIDE

[ABN: TerraNeem Oil]

Anti-Feedant, Insect Repellent, Insect Growth Regulator

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

[OMRI Seal]

Active Ingredient:

Cold Pressed Neem Oil*..... 100.0%

Other Ingredients..... 0.0%

Total 100.0%

*Contains azadirachtin at 3750 ppm

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

If you do not understand the label, find someone to explain it to you in detail (Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.)

NET CONTENTS 8 oz. to 275 GALLONS

EPA Reg. No. ~~88760-484185-4~~

Batch

No.

EPA Est. No. 84185 – IND - 1

Manufactured by:

Terramera, Inc.

6920 Salashan Pkwy D-109

Ferndale, WA 98248

1-800-597-9509

Plasma Power Private Limited

423 New Avadi Road

~~Kilpauk, Chennai 600 010, India
Tel: +91-44-2647 1551 / 2647 1552
Fax: 1-800-859-7115 (Toll free) / +91-44-2647 1553
Email: manager@plasmancem.com
Website: <http://www.plasmancem.com>~~

Plasma Neem® Oil (EPA Reg. No. 88760-484185-4)
Sublabel A: Agricultural Use

Plasma Neem® Oil
BIOLOGICAL INSECTICIDE
[ABN: TerraNeem Oil]

Anti-Feedant, Insect Repellent, Insect Growth Regulator

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



FOR ORGANIC PRODUCTION

[OMRI Seal]

Active Ingredient:

Cold Pressed Neem Oil*..... 100.0%

Other Ingredients..... 0.0%

Total 100.0%

*Contains azadirachtin at 3750 ppm

KEEP OUT OF REACH OF CHILDREN
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Fax: 1-800-859-7115 (Toll free) / +91-44-2647 1553
Email: manager@plasmaneem.com
Website: <http://www.plasmaneem.com>

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

First Aid
If inhaled: Move the 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. Call a doctor or poison control center for treatment advice.
If on skin or clothing: Remove contaminated clothing. Rinse skin immediately with plenty of water for about 15 minutes. Call a doctor or poison control center for treatment advice.
If in eyes: Hold eye open and rinse slowly and gently with water for about 15 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes. Call a doctor or poison control center for treatment advice.
If swallowed: Call a poison control center or doctor immediately for treatment. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless instructed 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 emergencies, call the poison control center 1-800-222-1222. FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE 1-800-859-7115

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Chemical resistant gloves
- Shoes with 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 use: This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water bodies. Do not contaminate water when cleaning equipment or disposing wash water. 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. 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.

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.

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 12 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
- 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 controls target pests primarily by ingestion and also by contact. The modes of action are repellence, anti-feeding action and interference with the molting process.

[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.]

GENERAL INFORMATION

Read all directions before using this product.

Apply **Plasma Neem® Oil** as directed to any food or non-food crop up to and including the day of harvest, at a maximum rate of 3½ pints **Plasma Neem® Oil** /acre (emulsified by using at least 11 fl. oz. of surfactant plus 40 gallons of water). In most cases, use a concentration of 0.5% **Plasma Neem® Oil** in water plus surfactant. In case of severe infestation, use a 1.1% concentration. Do not use a concentration above 1.1% **Plasma Neem® Oil**. Refer to the Mixing and Application Instructions for mixing and rate instructions, and to Use Site Section for a complete listing of 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. Neem oil clouds and solidifies at temperatures below 59°F. If oil has solidified, gently thaw by exposing to temps over 80°F. REFER TO THAWING INSTRUCTIONS BELOW.

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

[optional chart

THAWING INSTRUCTIONS	
1-Gallon bottles and smaller	<i>If oil has solidified, thaw by standing bottle in warm water. Make sure cap is tightly closed. Avoid direct exposure to temperatures over 104°F. Alternatively, follow instructions #1 or 2 for the 55-gallon drums.</i>
55-Gallon Drums	<p><i>1. Set the drum (cap tightly closed) out in the sun in 80°F and over until melted. Do not expose to temps over 104°F. Move to a cool place after oil has melted.</i></p> <p style="text-align: center;"><i>or</i></p> <p><i>2. Set the drum (cap tightly closed) in a heated room, 80°F and over until melted. Do not expose to temps over 104°F. Move to a cool place after oil has melted.</i></p> <p style="text-align: center;"><i>or</i></p> <p><i>3. Strap drum heating bands around the drum, either one in the middle or one on top and one below. Set thermostat between 80-90 °F.</i></p>
DO NOT INTRODUCE ANY KIND OF HEATING ELEMENT INTO THE DRUM & OIL. THIS WILL DESTROY ALL THE ACTIVE INGREDIENTS IN THE OIL.	

MIXING

Plasma Neem® Oil (azadirachtin 3000 ppm) is pure neem oil and requires a surfactant, [such as soap, dish washing fluid,][*a non-ionic surfactant/emulsifier*] or emulsifier such as soap nut for dilution with water. Note: Plasma Neem® Oil must be diluted with water and a surfactant in order to form a spray able emulsion.

[NOTE: Do not attempt application without adding adequate quantity of emulsifier, or surfactant as improper emulsification will result in phytotoxicity such as leaf burn.]

- Use a concentration of 0.5% (1 part of Plasma Neem® Oil to approximately 200 parts of water).
- In cases of severe infestation, use 1.1% (1.1 parts of Plasma Neem® Oil to approximately 100 parts of water). Do not use a concentration above 1.1% Plasma Neem Oil.
- Do not attempt application without adding adequate quantity of surfactant as improper emulsification will result in phyto toxicity.

Add the surfactant, such as soap, and **Plasma Neem® Oil** to a mixing tank, and stir. The ratio of surfactant to **Plasma Neem® Oil** must be in the ratio 1:5. For every pint of **Plasma Neem® Oil (azadirachtin 3000 ppm)**, use at least 3 fl. oz. of surfactant. Then add water to the spray tank with continuous agitation. Use warm water if ambient temperature is below 60° F.

[Add the /emulsifier/surfactant and Plasma Neem® Oil to a mixing tank with a little water and agitate. Then add remaining water to the spray tank with continuous agitation. Use warm water if water temperature is below 60oF. There should not be oil floating on top.

Complete filling the tank with water. 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® 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 will provide optimal performance. Always use this product promptly after mixing with water and do not let tank mix sit for any extended period. For optimal efficacy, use within 8 hours of mixing.

If the water is cold, use a little warm water to premix the oil and soap in a small container. Shake or stir well till milky and then add to the remaining water in the spray tank. Agitate or mix well to make sure the oil is completely emulsified before spraying. Add more soap/surfactant/emulsifier if needed.]

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 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 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: Along with the recommended quantity of surfactant or emulsifier, **Plasma Neem® Oil** is best applied independently but has been found to be compatible with tank mixes including liquid fertilizers such a 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 phyto toxic 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 if this oil does not form a uniform, milky emulsion. Adjust with addition of warm water or more emulsifier and agitate before use.

Plasma Neem® Oil may not be compatible with deltamethrin formulations such as Decis®.

[TANK MIX COMBINATIONS:

Plasma Neem® Oil in combination with the proper surfactant or emulsifier has been found to be compatible with most other tank mixes including fertilizers such as seaweed, kelp, fish emulsion and adjuvants like karanja oil, cottonseed oil and castor oil.

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 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.

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.

Do not use if this oil does not form a uniform, milky emulsion. Adjust with addition of warm water or more emulsifier and agitate before use.]

PHYTOTOXICITY: When used according to label instructions, **Plasma Neem® Oil** 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 phyto toxicity be conducted before treating the entire area. Further, all possible mixtures of pesticide sprays, other fertilizers, surfactants, adjuvants, have not been tested. Therefore testing for phyto toxicity of spray mixtures is recommended. Spray equipment used to apply Plasma Neem® Oil must be thoroughly cleaned before use. Tank mix combinations of **Plasma Neem® Oil** may be incompatible with oil-based formulations.

APPLICATION INSTRUCTIONS

Spray when the onset of pests (see Pest List) is expected or soon after pests are noticed. When used as a foliar application, spray Plasma Neem® Oil 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 rain within four hours of spraying.

SPRAY DIRECTIONS

Apply Plasma Neem® Oil as a foliar spray or as soil drench to control insects. When needed, soil drenches can also be used to control soil borne pests and larvae of pests. When applied as a soil drench, avoid excessive run off. Plasma Neem® Oil can also be applied through sub-surface soil treatment equipment. Always follow equipment manufacturer's use directions. Plasma Neem® Oil may be applied using any powered or manual pesticide application equipment which includes high volume, low volume, ultra-

low volume, electrostatic and fogging. Follow the original manufacturer's instructions when using these types of equipment.

RATES

For most pest and crop conditions, use Plasma Neem® Oil at 1-2 pints/acre using a 0.5% concentration of Plasma Neem® Oil in water. Use at least 3 – 6 ½ fl. oz. of surfactant for emulsification.

- (1 pint of Plasma Neem® Oil + 3 fl. oz of surfactant + 25 gallons of water)
- (2 pints of Plasma Neem® Oil + 6 1/2 fl. oz. of surfactant + 50 gallons of water)

In the case of very heavy pest pressure, use up to 3½ pints per acre in a 1.1% concentration of Plasma Neem® Oil in water. Use at least 11 fl. oz. of surfactant for emulsification.

- (3 ½ pints of Plasma Neem® Oil + 11 fl. oz. of surfactant + 40 gallons of water)

When used alone (without fertilizers or other pesticides) for sensitive crops such as lettuce, spinach and asparagus, use 6 fluid ounces per acre of Plasma Neem® Oil in a 0.5% concentration of Plasma Neem® Oil in water. Use 1 fl. oz. of surfactant for emulsification. The amount of Plasma Neem® Oil may be reduced by 50% when tank mixed with other compatible products.

[optional chart:

Agricultural Insect Control		
Spray Target	% Concentration (Neem Oil to Water Ratio)	Spray Intervals
<i>Citrus, Pome, Stone and Tropical Fruits</i>	<i>0.5% to 1.1% (1:200 to 1:100)</i>	<i>7 to 14 days</i>
<i>Cucurbits</i>	<i>0.5% to 1.0% (1:200 to 1:100)</i>	<i>7 to 14 days</i>
<i>Small Fruits And Berries</i>	<i>0.5% to 1.0% (1:200 to 1:100)</i>	<i>7 to 14 days</i>
<i>Nuts</i>	<i>0.5% to 1.1% (1:200 to 1:100)</i>	<i>7 to 14 days</i>
<i>Legumes and Fruiting Vegetables</i>	<i>0.5% to 1.0% (1:200 to 1:100)</i>	<i>7 to 14 days</i>
<i>Roots and Tuber Vegetables</i>	<i>0.5% to 1.0% (1:200 to 1:100)</i>	<i>7 to 14 days</i>
<i>Vegetable , Cereal Grains & Other Misc. Crops</i>	<i>0.5% to 1.0% (1:200 to 1:100)</i>	<i>7 to 14 days</i>

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

USE SITES

CROP USES – Use **Plasma Neem® Oil** on the following crops:

Alfalfa, Beans, Berries, Bulb Vegetables, Cereal Grains, Citrus fruits, Cole Crops, Cotton, Cucurbits, Fruits, Herbs, Legumes, Leafy and Fruiting Vegetables, Peanuts, Roots and Tubers, Pome and Stone Fruits, Tobacco, Tree Nuts and Tropical Fruits.

USE on Other Plants – Use **Plasma Neem® Oil** on other sites including: ornamentals, nurseries, and fencerows

PESTS

Use against the following pests:

Aphids: (Cotton aphids, Cowpea aphids, Mustard aphids, Okra aphids, Pea aphids, Rice aphids).

Armyworms

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, Soya bean 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 grass hopper, Leaf hopper, Potato leaf hopper, Rice brown plant hopper, Rice grass hopper, Rice green leaf hoppers

Leafminers: Leafminers of ornamental plants, tomato leaf miner.

Whiteflies: Cotton white fly, Sugar cane white fly, Banded wing white flies, citrus white flies

Mealy Bugs: Mealy bugs of ornamental plants

Midges: Brassica pod midge

Mites: Spider Mites

Nematodes: Root knot nematodes

Weevils: Black Vine Weevil

Scales: California red scales, Yellow scales, Coffee green scales

Thrips: PeanutThrips

[optional chart]

<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</i>
<i>Leafminers</i>	<i>Leafminers of Ornamental Plants, Tomato Leafminer</i>
<i>Whiteflies</i>	<i>Cotton Whitefly, Sugarcane Whitefly, Banded Wing Whitefly, Citrus</i>

	<i>Whitefly</i>
<i>Mealy Bugs</i>	<i>Mealy Bugs of Ornamental Plants</i>
<i>Midges</i>	<i>Brassica Pod Midge</i>
<i>Mites</i>	<i>Spider Mites</i>
<i>Nematodes</i>	<i>Root knot 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 Thrip</i>

]

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.

*Plasma Neem® Oil is the registered trademark of Plasma Power Private Limited.
Contains Plasma Neem® Oil manufactured by Plasma Power Private Limited, India.*

Plasma Neem® Oil (EPA Reg. No. 88760-484185-4)
Sublabel A: Residential Use

Plasma Neem® Oil
BIOLOGICAL INSECTICIDE

Anti-Feedant, Insect Repellent, Insect Growth Regulator

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



FOR ORGANIC GARDENING

[OMRI Seal]

Active Ingredient:

Cold Pressed Neem Oil*..... 100.0%

Other Ingredients..... 0.0%

Total 100.0%

*Contains azadirachtin at 3750 ppm

KEEP OUT OF REACH OF CHILDREN
CAUTION

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

If you do not understand the label, find someone to explain it to you in detail (Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.)

NET CONTENTS 8 oz. to 275 GALLONS

EPA Reg. No. 88760-484185-4

Batch

No.

EPA Est. No. 84185 – IND - 1

Manufactured by:

Terramera, Inc.

6920 Salashan Pkwy D-109

Ferndale, WA 98248

1-800-597-9509

Plasma Power Private Limited

123 New Avadi Road

Kilpauk, Chennai 600 010, India

Tel: +91-44-2647-1551 / 2647-1552

Fax: 1-800-859-7115 (Toll free) / +91-44-2647-1553

Email: manager@plasmaneem.com
Website: <http://www.plasmaneem.com>

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

Route of Entry	First Aid
If inhaled	Move the 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. Call a doctor or poison control center for treatment advice.
If on skin or clothing	Remove contaminated clothing. Rinse skin immediately with plenty of water for about 15 minutes. Call a doctor or poison control center for treatment advice.
If in eyes	Hold eye open and rinse slowly and gently with water for about 15 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes. Call a doctor or poison control center for treatment advice.
If swallowed	Call a poison control center or doctor immediately for treatment. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless instructed 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 emergencies, call the poison control center 1-800-222-1222. FOR MEDICAL EMERGENCIES INVOLVING THIS PRODUCT, CALL TOLL FREE 1-800-859-7115	

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water bodies. Do not contaminate water when cleaning equipment or disposing wash water. 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.

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 controls target pests on contact or by ingestion. The product acts on pests by way of repellence, anti-feedant action and interference with the molting process. 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. Neem oil clouds and solidifies at temperatures below 59°F. If oil has solidified, gently thaw by exposing to temps over 80°F.

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

THAWING (MELTING) INSTRUCTIONS

Thaw (melt) solidified or frozen oil as suggested below:

8oz., 32 oz and 1-Gallon bottles	If oil has solidified, thaw 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.
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MIXING INSTRUCTIONS

Plasma Neem® Oil contains pure cold pressed Neem Oil and requires a surfactant/emulsifier, such as soap (hand or dish soap may be used), a non-ionic surfactant/emulsifier or other organic emulsifier for dilution with water. NOTE: Do not attempt application without adding adequate quantity of surfactant or soap as improper emulsification will result in phytotoxicity such as leaf burn.

Add the soap/surfactant/emulsifier and *Plasma Neem®* to a mixing tank or spray bottle with a little water and agitate thoroughly. Then add remaining water to the spray tank or spray bottle with continuous agitation. Use warm water (not hot) if water temperature is below 60°F.

Use Sites: Plasma Neem® Oil may be used on various plants including beans, berries, 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 at 0.5-2.0% (2.0% only for trees, other applications 0.5% to 1.0%) plus soap, surfactant or emulsifier in sufficient amounts of water to achieve complete coverage Plasma Neem® 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 as a foliar spray or as soil drench to control insects. When needed, soil drenches can also be used to control soil borne pests and larvae of pests. When applied as a soil drench, avoid excessive run off.

Instructions for 1 Gallon Sprayer

Concentration	Fluid Ounces (oz) Neem Oil per Gallon Water	Tablespoons (approx.) per Gallon Water	Soap (approx.) Recommendation
0.5%	2/3 oz	1 1/3 Tbs	1/3 – 2/3 teaspoon
1.0%	1 1/3 oz	2 1/2 Tbs	2/3 – 1 1/3 teaspoon
2.0% (trees only)	2 1/2 oz	5 Tbs	1 1/3 – 2 1/2 teaspoon

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

Concentration	Teaspoons (approx.) Neem Oil per 32 ozs. (1 Qt) Water	Soap (approx.) Recommendation
0.5%	1 teaspoon	1/12 - 1/6 teaspoon
1.0%	2 teaspoons	1/6 – 1/3 teaspoon
2.0% (trees only)	4 teaspoons	1/3 – 2/3 teaspoon

Note:

1. Use adequate amount of soap/surfactant to form a good emulsion. Initially, use 1/2 to 1 teaspoon soap/surfactant/emulsifier per ounce of Plasma Neem® Oil Use more as needed.
2. Amount of soap required varies according to the nature of the soap/emulsifier/surfactant used. Start with a smaller quantity* and increase as needed to create a milky solution. **NOTE: NO OIL SHOULD BE FLOATING ON TOP.**
(*Too much soap could cause leaf burn.)

PESTS: Plasma Neem® Oil may be used against the following pests:

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
Leafminers	Leafminers of Ornamental Plants, Tomato Leafminer
Whiteflies	Cotton Whitefly, Sugarcane Whitefly, Banded Wing Whitefly, Citrus Whitefly
Mealy Bugs	Mealy Bugs of Ornamental Plants
Midges	Brassica Pod Midge
Mites	Spider Mites
Nematodes	Root knot nematodes
Weevils	Black Vine Weevil
Scales	California Red Scale, Yellow Scale, Coffee Green Scale
Thrips	Peanut Thrip

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.

