

84185-5

Version 1B
July, 2014

Plasma Neem® Oil EC (EPA Reg. No. 84185-5)
MASTER LABEL
Sublabel A is for Agricultural Use
Sublabel B is for Residential Use

Plasma Neem® Oil EC
Biological Insecticide
Anti-Feedant, Insect Repellent, Insect Growth Regulator

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

Active Ingredient:
Cold Pressed Neem Oil*..... 84.9%
Other Ingredients..... 15.1%
Total 100.0%

* Contains azadirachtin at 4025.76 ppm

KEEP OUT OF REACH OF CHILDREN
CAUTION

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

Shake Well Before Use

NET CONTENTS: 8 oz. to 275 GALLONS

EPA Reg. No. 84185 – 5
EPA Est. No. 84185 – IND - 1

Batch No.

Manufactured by:
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

ACCEPTED

JUL 31 2014

Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for
the pesticide registered under
EPA Reg. No. 84185-5

Plasma Neem® Oil (EPA Reg. No. 84185-5)
Sublabel A: Agricultural Use

Plasma Neem® Oil EC

Biological Insecticide
Anti-Feedant, Insect Repellent, Insect Growth Regulator

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

 **FOR ORGANIC PRODUCTION**

Active Ingredient:

Cold Pressed Neem Oil* 84.9%

Other Ingredients..... 15.1%

Total 100.0%

* Contains azadirachtin at 4025.76 ppm

KEEP OUT OF REACH OF CHILDREN
CAUTION

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**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 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 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.

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 are repellence, anti-feeding action and interference with the molting process.

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, at a maximum rate of 5 pints **Plasma Neem® Oil EC/acre**. In most cases, use a concentration of 0.6% Plasma Neem EC. In case of severe infestation, use a 1.3% concentration of Plasma Neem EC. Refer to the Mixing and Application Instructions for mixing and rate instructions and to Use Site Section for a complete listing of crops.

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.

- Use a concentration of 0.6% Plasma Neem EC (1 part of Plasma Neem® Oil EC to approximately 170 parts of water).
- In cases of severe infestation, use 1.3% Plasma Neem EC (1 part of Plasma Neem® Oil EC to approximately 85 parts of water).

Add the **Plasma Neem® Oil EC** 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 60°F.

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

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 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 EC** must be thoroughly cleaned before use. Tank mix combinations of **Plasma Neem® Oil EC** 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 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.

SPRAY DIRECTIONS

Apply **Plasma Neem® Oil EC** 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 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 and fogging. Follow the original manufacturer's instructions when using these types of equipment.

RATES

Most Pest and Crop Conditions:

For most pest and crop conditions, use Plasma Neem® Oil EC at 1-2 pints/acre using a 0.5% concentration of Plasma Neem® Oil EC in water. Use this rate for sensitive crops, such as lettuce, spinach and asparagus. The amount of Plasma Neem® Oil EC may be reduced by 50% when tank mixed with other compatible products.

(1¼ pint of Plasma Neem® Oil EC + 25 gallons of water)

(2½ pints of Plasma Neem® Oil EC + 50 gallons of water)

Very Heavy Pest Pressure:

In the case of very heavy pest pressure, use up to 5 pints per acre in a 1.3% Plasma Neem EC in water.

(5 pints of Plasma Neem® Oil EC + 50 gallons of water)

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

USE SITES

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

Alfalfa, Beans, Berries and Small Fruit, Bulb Vegetables, Cereal Grains, Citrus Fruits, Cole Crops, Cotton, Cucurbits, Fruits, Grapes, 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 EC** on other sites including: ornamentals, nurseries, fencerows and turf including golf courses, parks, and other grass areas.

PESTS

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</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</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>Amyworms</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 $\frac{1}{4}$ 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.

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

Plasma Neem® Oil EC (EPA Reg. No. 84185-5)
Sublabel B: Residential Use

Plasma Neem® Oil EC

Biological Insecticide

Anti-Feedant, Insect Repellent, Insect Growth Regulator

For Crop and Use on Other Plants

including vegetables, fruits, nuts, [and] ornamental plants, and other plants

 **For Organic Gardening**

Active Ingredient:

Cold Pressed Neem Oil*	84.9%
Other Ingredients	15.1%
Total	100.0%

* Contains azadirachtin at 4025.76 ppm

KEEP OUT OF REACH OF CHILDREN
CAUTION

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT
Shake Well Before Use

NET CONTENTS: 8 oz. to 275 GALLONS

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**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 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 the Neem 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 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. 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 EC 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 EC at 0.6 – 1.3% (1.3% only for trees, other applications 0.5% to 1.0%) 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 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

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

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

Concentration	Teaspoons (approx.) Neem Oil per 32 ozs. (1 Qt) Water
0.6%	1¼ teaspoon
1.3%	2½ teaspoons
2.0% (trees only)	4 teaspoons

PESTS: Plasma Neem® Oil EC 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.