# ecoFOG-100

Post Harvest Diphenylamine Anti-scald Agent for Post-Harvest Treatment of Apples by Thermal Fogging

## **COMMERCIAL**

# PLANT GROWTH REGULATOR

ecoFOG-100 is recommended for reducing scald damage to apples while in storage.

ecoFOG-100 is a special liquid form of diphenylamine intended for use with a Xeda Brand Thermal Electrofogger to form a fine fog.

## **SOLUTION**

READ THE LABEL BEFORE USING. REGISTRATION NO. 30410 PEST CONTROL PRODUCTS ACT

# KEEP OUT OF REACH OF CHILDREN

## **CAUTION**

Net Contents:

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#### **FIRST AID**

Take container, label or product name and Pest Control Product Number with you when seeking medical attention.

If swallowed • Call a poison control center or doctor immediately for treatment advice.

- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**If in eyes** • Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

• Call a poison control center or doctor for treatment advice.

## If on skin or clothing

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

## **PRECAUTIONS**

Hazards to Humans and Domestic Animals

Caution. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear eye protection (such as goggles, safety glasses, or a face shield) when mixing and loading. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

Handlers (including mixers, loaders, persons cleaning or monitoring fogging equipment, and persons handling treated apples or apple containers still wet with DPA) must wear long-sleeved shirt, long pants, chemical resistant gloves and protective eyewear, such as goggles, safety glasses or a face shield.

Fogging applicators must wear either a NIOSH/MSHA/BHSE approved full face supplied-air respirator OR a NIOSH/MSHA/BHSE approved self-contained breathing apparatus (SCBA) with a full face piece in addition to all protective equipment required for handlers as described above.

Do not enter treatment room until fumigation is complete and the air concentration of diphenylamine is below 10 mg/m3. Only a detection device of sufficient sensitivity can be used to confirm an air concentration of diphenylamine of 10 mg/m3 or less. These detection devices must be calibrated according to manufacturer recommendations. The air concentration of diphenylamine must be monitored in breathing zones.

After the treated area is sealed and locked, a sign must be posted at all entrances to the treatment area. The sign must include the following statement: "CAUTION: Do not enter area. Diphenylamine fogging treatment in progress. No one shall be in the fogging areas if the air concentration of diphenylamine is above 10mg/m3 unless wearing either a NIOSH/MSHA/BHSE approved full face supplied-air respirator OR a NIOSH/MSHA/BHSE approved self-contained breathing apparatus (SCBA) with a full face piece, long-sleeved shirt, long pants, chemical resistant gloves and shoes and socks."

Aerate structures/enclosures only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction and temperature inversions.

#### **ENVIRONMENTAL HAZARDS**

Toxic to aquatic organisms.

#### PHYSICAL OR CHEMICAL HAZARDS

**Combustible.** Do not use or store near heat or open flame.

## **DIRECTIONS FOR USE**

It is a violation of federal law to use this product in a manner inconsistent with its labelling. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT discharge effluent containing this product into sewer systems, lakes, streams, ponds, estuaries, oceans or other waters.

## **Application Restrictions**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. Consult Agricultural

Experiment Station or Extension Service pomology specialists for current recommended DPA use-solution concentrations for local apple varieties.

### Recommendations

- Treat only dry fruit as received from the field.
- Apply to fruit within 15 days after harvesting, prior to placing in storage.
- In case of prolonged storage (more than 4 months) or particularly high danger of scald due to environmental conditions, a second treatment is advisable between the second and third months of storage. This second treatment must be applied at a rate of between 50% and 100% of the initial dosage, depending on the importance of the danger and the length of further storage. A second treatment of 100% of the first dose is recommended for any additional storage of 3 months or longer.
- Before treatment, fruit in bins must be protected on top with plastic liners, cardboard sheets or Kraft sheets. Fruit directly in front of the fogging equipment should also be protected with liners or sheets from top to bottom.
- In case of treatment of a room that is not completely filled, calculate the dosage of ecoFOG-100 by adding 20% of the tonnage value that would occupy the empty space to the real tonnage of the fruit.
- $\bullet$  To reduce scald on apples, apply ecoFOG-100 by thermal fogging at the rate of 60-125 mL/1000 kg. Use the lower application rate on less susceptible varieties. Consult with pomology specialists for DPA application rate recommendations within the labeled range for specific apple varieties.

Electrofogger Operation

- Place the Electrofog machine horizontally outside the treatment room at a height of about 1 meter from the floor. Cover the door or window to the treatment room with a plastic sheet and insert the fogging pipe through a hole in the plastic. Place a bucket under the nozzle to catch any drops. Seal the opening around the nozzle with duct tape.
- Set the Electrofog machine resistance temperature between 500° to 600° C.
- Insert input pipe into product container and start pump. Stop pump when product reaches the pump body.
- Start fan and resistance, and start pump again when fog exit temperature reaches 180°C. Adjust pump as necessary during operation to maintain 180°C.

## **Application Procedures**

- Avoid breathing the fog.
- Turn off room cooling systems and humidifiers 12 hours prior to and during treatment.
- Turn off room circulation fans immediately prior to and during treatment.
- Allow the fog to stay overnight or until the fog has totally disappeared (about 5 hours post-treatment) before restarting fans and cooling systems.
- DO NOT rinse apples after treatment.
- DO NOT apply to fruit treated with Diphenylamine prior to harvest.
- DO NOT use treated apples for pomace or livestock feed as illegal residues may occur in meat or milk
- DO NOT wrap apples in Diphenylamine-treated paper.
- Fruit must have shipping carton marked: "Treated with Diphenylamine to retard spoilage."

#### Re-Entry

Entry into the treatment area by any person other than properly trained and equipped handlers is prohibited from the start of application until the treated area is ventilated as follows:

- 8 hours with no ventilation followed by 1 hour of mechanical ventilation
- 24 hours with no ventilation

In case it is necessary to enter the treatment area during treatment or before ventilation requirements have been met, handlers must wear chemical resistant headgear and a self contained breathing apparatus (SCBA, MSHA/NIOSHA approval number prefix TC-13F) in addition to PPE listed under PRECAUTIONARY STATEMENTS.

# Check for Post-Treatment Signs of Scald.

In years of severe scald development, ecoFOG-100 may not give desired control or other factors may reduce its effectiveness. After several months of storage, collect samples of fruit periodically (every 2 or 3 weeks) and hold them at room temperature to assess Scald development. Fruit lots showing scald can often be marketed immediately.

# STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Avoid storing below 5° C. In case of spill or leak, absorb liquid with sawdust or other absorbent material and incinerate or dispose of it in approved disposal area. PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.

- 2. Follow provincial instructions for any required additional cleaning of container prior to disposal.
- 3. Make empty container unsuitable for further use.
- 4. Dispose of container in accordance with provincial requirements.
- 5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

# NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

MADE IN USA

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