

DEC 12 1994

NOTICE OF PESTICIDE:

REGISTRATION
 REREGISTRATION

(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

NAME OF PESTICIDE PRODUCT

Harpoon

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Richard Stedman
Tree Technology Systems, Inc.
1014 Rein Road
Cheektowaga, NY 14225

5477874 $\frac{160}{18}$

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) section 3(c)(7)(A) provided that YOU:

1. Submit/cite all data required for registration/ reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the labeling changes listed below before you release the product for shipment:

a. Revise the EPA Registration Number to read, "EPA Reg. No. 64014-9."

b. Add the following statements to the label to comply with the Worker Protection Standard. Please refer to PR Notice 93-7 for complete instructions.

i) Create a label box called "Agricultural Use Requirements." Place it near the beginning of the Directions for Use section on the label. The statements in "Agricultural Use Requirements" must be located in a clearly separate box on the product labeling -- with lines or other graphic indicators to separate them from the surrounding text as follows:

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

[Handwritten Signature]

DEC 12 1994

[Handwritten Signature]

12/12/94

A-6 10/1/97

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, restricted-entry interval, and notification to workers."

ii) After chemical-resistant gloves, add "such as barrier laminate or viton \geq 14 mls."

iii) The "User Safety Recommendations" section must be placed under the heading "Precautionary Statements -- Hazards to humans and domestic animals." The statements in "User Safety Recommendations" must be located in a clearly separate box on the product labeling -- with lines or other graphic indicators to separate them from the surrounding text as follows:

USER SAFETY RECOMMENDATIONS

[The language in your current label is acceptable.]

3. Submit one copy of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

-3-

A stamped copy of the label is enclosed for your records.

Sincerely yours,

Robert A. Forrest
Product Manager (14)
Insecticide-Rodenticide Branch
Registration Division (7505C)

Enclosure: 1) Stamped label
 2) A-79 Enclosure

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

RESTRICTED USE PESTICIDE
Due to Reproductive Effects

For sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicators certification. Direct supervision for this product is defined as the certified applicator being physically present during application, mixing, loading, equipment repair, and equipment cleaning. Certified applicators must ensure that all persons involved in these activities under their direct supervision are informed of the precautionary statements.

HARPOON®

FOREST, ORNAMENTAL, NONCROP-BEARING AND CHRISTMAS TREE INSECTICIDE



Containing METASYSTOX-R® Insecticide
For Effective Systemic Protection
This product is an Organophosphate Insecticide

ACTIVE INGREDIENT:
S-[2-(Ethylsulfiny)ethyl] O,O-Dimethyl phosphorothioate. 50%
INERT INGREDIENTS 50%
Total 100%

Contains aromatic petroleum distillate
Metasystox-R is a Reg. TM of the Gowan Company

**KEEP OUT OF REACH OF CHILDREN
DANGER-PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail).

STATEMENTS OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Call a physician.

IF INHALED: Remove victim to fresh air immediately. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious or convulsing person.

IF ON SKIN: Remove contaminated clothing and immediately wash affected area with soap and water. Get medical attention. Wash clothing before reuse. If poisoning occurs, obtain medical aid immediately.

SEE ANTIDOTE AND OTHER PRECAUTIONARY STATEMENTS ON SIDE PANEL

NET WEIGHT: 0.1 oz. per injector (equiv. to 3 ml per injector)
EPA REG. NO. 64014- EPA EST. NO. 64014-NY-1

TREE TECHNOLOGY SYSTEMS, INC.
1014 REIN ROAD - CHEEKTOWAGA, NY 14225 U.S.A.



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Causes irreversible eye damage. May be fatal if inhaled, swallowed or absorbed through the skin. Do not get in eyes, on skin or on clothing. Do not breathe vapor. Remove contaminated clothing and wash before reuse. Do not contaminate feed or food.

SYMPTOMS OF POISONING

A sense of tightness in the chest. Sweating. Contracted pupils. Stomach pains, vomiting and diarrhea.

NOTE TO PHYSICIAN - ANTIDOTE

Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. 2-PAM is also antidotal and may be administered in conjunction with atropine.

Compound inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system and the somatic motor nerves. Do not give morphine. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 12 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

PERSONAL PROTECTIVE EQUIPMENT

AND WORKER SAFETY STATEMENTS

REPEATED EXPOSURE TO CHOLINESTERASE INHIBITOR SUCH AS CONTAINED IN THIS PRODUCT MAY, WITHOUT WARNING, CAUSE PROLONGED SUSCEPTIBILITY TO VERY SMALL DOSES OF ANY CHOLINESTERASE INHIBITOR.

Do not rub eyes or mouth with hands. If you feel sick in any way, STOP WORK, and get help right away.

See Statements of Practical Treatment on this label.

Handle the ARBORx INJECTOR UNITS only when wearing the following Protective Clothing and Equipment: Long sleeved shirt; long legged pants; chemical resistant shoes or boots plus socks; chemical resistant gloves; goggles, safety glasses or face shield. If used in areas of limited ventilation wear a respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). If product is handled indoors provide adequate mechanical ventilation.

User Safety Recommendations

IMPORTANT! If pesticide comes in contact with skin, wash off with soap and water and contact a physician immediately. Before removing gloves wash them with soap and water. Always wash hands, face, and arms with soap and water before smoking, eating, drinking, or toileting.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

FLAMMABLE - Keep away from heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. **IMPORTANT:** Read these entire Directions and Conditions of Sale before using HARPOON® Insecticide. (64HARP.PM5110-31-94)

Working Copy

PRECAUTIONARY

1. Protective eyewear (goggles, safety glasses) and chemical resistant gloves must be worn when using the injector units. See sections dealing with eye and skin protection.
2. When properly installed, the injector unit creates a pressure resulting in the flow of HARPOON insecticide from the dispenser tube. The injector unit must be installed correctly and securely in the tree.
3. Injector units containing HARPOON insecticide should be emptied 15-20 minutes or more to empty depending on tree size and local weather conditions. Never see depressurized completely because the injector unit will not empty. When removing injector units, wear protective and chemical resistant gloves. Then cover the injector unit with one hand and insert into the stem while grasping the unit with the other hand. The injector unit will empty as it is slowly withdrawn from the tree.
4. Discard used injector units according to local and State **TAINER! DISPOSAL** in STORAGE AREA.

USE RESTRICTED

- Do not inject trees that are less than two inches in diameter.
- Do not inject trees within two weeks of any other chemical treatment.
- Do not treat trees that are suffering from drought, frost, moisture or herbicide damage.
- Do not use on trees which will produce fruit or seed during treatment (such as; apples, pears, etc.).

SITES, PESTS AND APPLICABILITY

PLANT INSECT/PEST		
Cedars	Bark Beetles	Tree
Cottonwoods	Achids	App
Cypress	Bark Beetles	Tree
	Mass	Octo
		App
Douglas Fir	Cone Moths	App
		dum
	Engraver Beetles	Tree
		Octo
Elms	Elm Leafbeetles	App
		sity
Jumpers	Bark Beetles	Tree
		Octo
Pines	Engraver Beetles	Tree
(Except	(6 spined)	Octo
Pinion)	Engraver Beetles,	
	(Monerary)	
	Flathead Borer	
	Mountain Pine Beetle	
	Red Turpentine Beetle	
	Black Turpentine Beetle	
	Western Pine Beetle	
	Jeffrey Needle Miner	Apri
	Mites	App
	Kanuckel Pine Tip Moth	Tree
	Pine Needle Aphid	App
	Pine Needle Scale	App
Redwood	Bark Beetles	Whi
	Mass	App
	Needle Scale	App
Spruce	Acegrids	App
Walnuts &	Aphids	App
Pecans	Mass	App
(Non-bearing)		



BEST AVAILABLE COPY

Working Copy

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PERSONAL PROTECTIVE EQUIPMENT

AND WORKER SAFETY STATEMENTS
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Do not rub eyes or mouth with hands. If you feel sick in any way, STOP WORK, and get help right away.

See Statements of Practical Treatment on this label.

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IMPORTANT! If pesticide comes in contact with skin, wash off with soap and water and contact a physician immediately. Before removing gloves wash them with soap and water. Always wash hands, face, and arms with soap and water before smoking, eating, drinking, or toileting.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

FLAMMABLE - Keep away from heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. **IMPORTANT:** Read these entire Directions and Conditions of Sale before using HARPOON® Insecticide. (64HARP.PM5110-31-94)

PRECAUTIONARY REMINDERS

1. Protective eyewear (goggles, safety glasses or face shield) and chemical resistant gloves must be worn while handling or installing the injector units. See sections dealing with protective clothing.
2. When properly installed, the injector unit generates internal pressure resulting in the flow of HARPOON® solution through the dispenser tube. The injector unit must never be activated unless installed correctly and securely in the tree to be treated.
3. Injector units containing HARPOON® may require up to several minutes or more to empty depending on the health of the treated tree and local weather conditions. Never assume that injector units have depressurized completely because they appear nearly empty or empty. When removing injector units, individuals must wear eye protection and chemical resistant gloves. The individual should then cover the injector unit with one hand near the point of the insertion into the stem while grasping the barrel end of the injector unit with the other hand. The injector unit should be turned slightly as it is slowly withdrawn from the tree.
4. Discard used injector units according to **INJECTOR (CONTAINER) DISPOSAL** in STORAGE AND DISPOSAL statement.

USE RESTRICTIONS

- Do not inject trees that are less than two inches in diameter.
- Do not inject trees within two weeks of any other spray or soil chemical treatment.
- Do not treat trees that are suffering from stress such as lack of moisture or herbicide damage.
- Do not use on trees which will produce food within the year following treatment (such as; nuts, berries, maple syrup, etc.)

SITES, PESTS AND APPLICATION TIMING

PLANT	INSECT/PEST	REMARKS
Cedars	Bark Beetles	Treat anytime from early spring thru October. Repeat after new invasion.
Cottonwoods	Aphids	Apply when wingless forms appear.
Cypress	Bark Beetles Mites	Treat anytime from early spring thru October. Repeat after new invasion. Apply after mite egg hatch.
Douglas Fir	Cone Moths Engraver Beetles	Apply to heavy, current cone crop trees during or shortly after eggs are laid. Treat anytime from early spring thru October. Repeat after new invasion.
Elms	Elm Leafbeetles	Apply after eggs are present or during early larval stage.
Junipers	Bark Beetles	Treat anytime from early spring thru October. Repeat after new invasion.
Pines (Except Pinon)	Engraver Beetles (5 spined) Engraver Beetles, (Monterey) Flathead Borer Mountain Pine Beetle Red Turpentine Beetle Black Turpentine Beetle Western Pine Beetle Jeffrey Needle Miner Mites Nantucket Pine Tip Moth Pine Needle Aphid Pine Needle Scale	April to June Apply after mite eggs hatch. Treat when larval damage first appears. Apply when wingless forms appear. Apply when crawler appears.
Redwood	Bark Beetles Mites Needle Scale	When active infestation sites are present. Apply after mite eggs hatch. Apply when crawlers appear.
Spruce	Aoegids	Apply in May - June
Walnuts & Pecans (Non-bearing)	Aphids Mites	Apply when wingless forms appear. Apply after mite eggs hatch.

INSTALLING INJECTOR UNITS

1. Determine the number of injector units to be installed based on: a) the target insect pest(s); b) stem circumference at breast height, and c) the registered dosage rate as administered by proper spacing of injector units around the stem circumference. Unless otherwise noted, injector units should be installed in the lower stem and root flares near the ground line, i.e. 6 to 8 inches (15 to 20 cm) from the soil surface.
2. Using a portable electric drill with a sharp, clean 11/64 inch (0.4 cm) bit, the installer should drill a hole at the correct stem circumference spacing to a depth of 1/4 to 1/2 inch (0.6 to 1.3 cm) into the wood (xylem) under the bark. A slight downwardly drilling angle is recommended for more complete drainage of the injector unit.
3. After reaching the proper depth range, the drill bit should be withdrawn carefully to avoid dislodging bark fragments around the exterior opening of the hole. The rear barrel portion of the injector unit should be compressed partially and the injector unit should be inserted into the hole. Placing the plastic installation cap over the rear barrel end, strike the cap with a plastic hammer to seat the injector unit firmly in the hole. If the injector unit is not properly positioned in the hole, strike the cap again until correctly seated. By striking the injector unit, the back of the feeder tip is forced back into the funnel-shaped section dislodging a septum which allows the HARPOON® solution to flow from the injector unit into the tree. When the injector unit is positioned correctly in the tree and the internal septum is dislodged to permit the flow of HARPOON® remove the cap and, if necessary, push the rear barrel portion of the unit further downwardly until it is flush with the edge of the locking mechanism. This engages the locking mechanism which pressurizes the injector unit and assists in the evacuation of HARPOON® from the injector unit and movement into the vascular system of the tree.
4. Each hole should be drilled and an injector unit installed without undue delay. After the injector is properly seated, it should be activated. This sequence minimizes the flow of tree sap or resin into the hole prior to injection.
5. Disinfect the drill bit between the injection of each tree with a mixture of 1 part household bleach to 4 parts water.

RECOMMENDED APPLICATIONS

Install one (1) ARBORx Injector Unit containing HARPOON® Insecticide for every 6 inches of tree trunk circumference.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food or feed by storage or disposal. Do not reuse empty container. Do not store in the home, car or office. Store injectors in a locked, cool, dry, storage area out of reach of children. Do not expose to temperatures below 32°F.
PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, or reuse is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
INJECTOR (CONTAINER) DISPOSAL: Do not reuse injectors. Used injectors should be placed in the heavy-duty plastic bag which accompanies each case of injector units. The bag must be properly sealed, placed into the original shipping carton and returned freight prepaid for disposal to Tree Technology Systems, Inc. 1014 Rein Road Cheektowaga, NY. 14225.

CONDITIONS OF SALE:

The directions on this label were determined through research to be the directions for correct use of this product. This product has been tested for a range of weather conditions similar to those weather conditions that are ordinary and customary in the geographic areas where the product is used. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather, or from failure to follow label directions. In addition, failure to follow label directions may cause injury to other crops, animals, man, or the environment. Tree Technology Systems, Inc. offers and the buyer accepts and uses this product subject to the conditions that extraordinary or unusual weather, or failure to follow label directions are beyond the control of Tree Technology Systems Inc. and are, therefore, the responsibility of the buyer.



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