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MACH 2™

LIQUID TURF INSECTICIDE

FOR CONTROL OF IMMATURE STAGES OF CERTAIN INSECTS IN TURFGRASS. NOT FOR SALE OR USE IN NASSAU AND SUFFOLK COUNTIES, NEW YORK.

ACTIVE INGREDIENT

Halofenozide

Benzoic acid, 4-chloro-, 2 benzoyl-2-(1,1-dimethylethyl) hydrazide.....22.3%*

INERT INGREDIENTS.....77.7%
100.0%

*Contains 2 lbs. active ingredient per gallon.

EPA Reg. No. 69075-2

Net contents: 2.5 Gallons

EPA Establishment No. 5905-GA-01

ACCEPTED

FEB 22 1999

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 69075-2

Notice: Before using this product, read entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions, and Storage and Disposal Instructions.

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

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

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Flush eyes with plenty of water. Consult a physician if irritation persists.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF INHALED: Move victim to fresh air.

IF SWALLOWED: Call a physician or poison control center. Drink one or two glasses of water. If person is unconscious, do not give anything by mouth and do not induce vomiting.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

May cause eye irritation. Harmful if absorbed through skin, inhaled, or swallowed. Avoid breathing spray mist. Avoid contact with eyes, skin, or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

WPS USES

Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard (40CFR part 170) - in general, agricultural plant uses are covered - must wear:

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

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handlers PPE requirements may be reduced or modified as specified in the WPS.

NON-WPS USES

Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40CFR part 170) - in general, only agricultural plant uses are covered by the WPS - must wear:

- Shirt and pants
- Gloves
- Shoes plus socks

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing

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. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

This chemical has the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow may result in groundwater contamination.

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.

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). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker 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 turf, plants, soil or water, is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard 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.

Keep children and pets out of treated area until sprays have dried.

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, dry, well-ventilated area. Prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of reach of children.

Do not allow product to freeze.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your local State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA region office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

IN CASE OF AN EMERGENCY ENDANGERING LIFE OR PROPERTY INVOLVING THIS PRODUCT, CALL DAY OR NIGHT, 1-800-424-9300.

GENERAL INFORMATION

MACH 2™ Liquid Turf Insecticide can be used as directed on the following commercial turfgrass sites (lawns, sod, turf areas). Examples of such sites include: commercial lawns, grounds or lawns around business and office complexes, shopping centers, airports, military and other institutions, cemeteries, golf courses, and sod farms.

MACH 2 mimics the action of a natural insect hormone which induces the molting and metamorphosis process in insects. MACH 2 is highly active against grubs and lepidopterous larvae listed as target pests. MACH 2 controls listed larvae through a novel mode-of-action which starts within hours of ingestion. Actual death of larvae may take several days to occur.

USE RATE DETERMINATION

Carefully read, understand, and follow label use rates, recommendations and restrictions. Apply the amount specified in the following table with a properly calibrated ground sprayer. Check calibration periodically to ensure that equipment is working properly. Avoid overlaps that will increase rates above those recommended. Failure to follow the DIRECTIONS FOR USE and all precautions on this label may result in grass injury or poor pest control.

APPLICATION TIMING

The activity of MACH 2™ Liquid Turf Insecticide is expressed following ingestion by the target larvae. Consequently, the timing of application is dependent upon the feeding behavior of the target pest. Consult your local State Extension Specialists for more specific information regarding timing of applications.

To achieve optimal effectiveness, the following turf management practices are suggested:

- o **Minimize thatch** since heavy thatch will prevent the insecticide from penetrating to the area where insects are feeding.
- o **Make applications prior to egg hatch or when larvae are small and actively feeding** (late spring through mid-summer).
- **MACH 2 is not dependent upon immediate irrigation for activation, however, water must transport the material through the thatch.** Under conditions of drought, it is recommended to water in MACH 2.
- **Avoid mowing turf until after product is washed from leaf blades so that uniformity of application is not affected.**

APPLICATION EQUIPMENT

Apply MACH 2 through conventional spray equipment in a minimum of 1 gallon finished spray per 1000 sq. ft. to provide uniform spray distribution. DO NOT apply MACH 2 through sprayers that use cluster spray nozzles due to variability in application use rates and spray patterns. DO NOT apply MACH 2 to golf course tees and greens using low pressure (i.e., 200 psi or less) hand wand applicators. Application using backpack equipment is permitted. Calibrate application equipment prior to use. Avoid skips by using marker-dyes or foam aids.

TANK MIXTURES

Read the label of each tank mixture product used and follow the Precautionary Statements, Directions for Use, and other restrictions. MACH 2 may be tank-mixed with fluid fertilizers or other pesticides. When applied according to label directions, a tank mixture of MACH 2 and an EPA-registered pesticide will provide control of susceptible pests listed on the respective labels for the two products. A compatibility test (see Compatibility test section) is suggested before tank-mixing this product with fluid fertilizers or other pesticides.

COMPATIBILITY TEST

Before mixing MACH 2 with fluid fertilizers or other pesticides, it is advisable to test compatibility by mixing all the components in a small jar in proportionate quantities.

Compatibility Test Mixing Instructions

Pesticide Formulation	IF:	Amount of Pesticide Added to Spray Carrier (Assuming Volume of 50 GPA) ADD:
	RATE per Acre	Level teaspoons per Pint Jar of Carrier Solution
Dry	1 Pound	1/2
Liquid	1 Quart	1/2

This compatibility test is designed for 50 gallons of spray solution per acre. The table above gives general guidelines for use rate ratios of pesticides to be tank-mixed with this product. Determine the amount of pesticide to tank-mix by referring to the pesticide label(s). Then calculate the amount of pesticide to add to the jar based on use rate ratios in the table. For a use rate of 1 pound per acre of dry pesticide or 1 quart per acre of liquid pesticide add 1/2 teaspoon to the jar. MACH 2™ Liquid Turf Insecticide should be added based on use rate ratios for liquid pesticides. For a use rate of 1.5 oz. per 1000 sq. ft. (app. 2 qt/Acre) add 1 teaspoon to the jar. For changes in spray volume or insecticide rate, make appropriate changes in the ingredients for the test. Shake well after mixing.

If pesticide(s) does not form crystals, flakes, sludge, jelly, oily films or layers, then the tested components are compatible. Incompatibility in any of the above described forms will usually occur within 5 minutes after mixing.

If components are incompatible, the use of a compatibility agent is recommended. Repeat the above test with a suitable compatibility agent (one-half teaspoon per pint jar is equivalent to 1 pint per 50 gallons of spray solution).

MIXING INSTRUCTIONS

MACH 2™ Liquid Turf Insecticide Alone:

Fill the spray tank to about three-fourths of the desired volume with clean water and begin tank agitation. Add the recommended amount of MACH 2 to the tank and complete the filling process. Maintain agitation through the mixing and spraying operations. If MACH 2 is allowed to settle, agitate thoroughly to resuspend before spraying is resumed.

Tank Mixes:

First determine the compatibility of MACH 2™ Liquid Turf Insecticide and the desired tank mixture partner(s) in water by mixing small proportional quantities in advance. See the "Compatibility Test" Section of this label, then adhere to the following mixing procedures.

1. Fill the sprayer half to two-thirds full with clean water. Start agitation and continue agitation through mixing and spraying operations.
2. Add a compatibility agent if needed. Read and follow all of the information found on the product label for the selected compatibility agent.
3. If a wettable powder or dry flowable pesticide is used, make a slurry with the water, and add it slowly to the tank.
4. Add MACH 2 and other flowable formulations to the tank.
5. Add emulsifiable concentrate pesticide to the tank.
6. Add water-soluble liquid pesticide formulations followed by surfactants, marker dyes or foams, or drift control additives while continuing the filling process.
7. Maintain good agitation at all times until the contents of the tank have been sprayed. If the spray mixture is allowed to settle, agitate thoroughly to resuspend the mixture before resuming spraying.

USE DIRECTIONS FOR TURFGRASS		
PEST	Amount of MACH 2™ Liquid Turf Insecticide	COMMENTS
Lepidoptera larvae such as: larvae of cutworms, sod webworms, armyworms, fall armyworms	2 Quarts/ Acre (1.5 fl.oz./1,000 sq. ft.)	Apply at first sign of pest damage. A single repeat application can be made if needed.
White grub larvae such as: Japanese beetle, <i>Popillia japonica</i> Northern masked chafer, <i>Cyclocephala borealis</i> Southern masked chafer, <i>Cyclocephala lurida</i> May/June beetle, <i>Phyllophaga</i> spp. Black turfgrass ataenius, <i>Ataenius spretulus</i> Green June beetle, <i>Cotinus nitida</i> Annual bluegrass weevil larvae, <i>Hyperodes</i> spp. Billbugs, <i>Sphenophorus</i> spp. Aphodius beetle, <i>Aphodius</i> spp.	3 quarts./Acre (2.2 fl. oz./ 1,000 sq. ft.)	MACH 2 may be used as either a preventative or an early curative treatment (see application timing instructions). Make only one application.
White grub larvae such as: European chafer, <i>Rhizotrogus majalis</i> Oriental beetle, <i>Exomala orientalis</i>	3-3.4 Quarts/Acre (2.2-2.5 fl. oz./1000 sq.ft)	MACH 2 may be used as either a preventative or an early curative treatment (see application timing instructions). Make one application at full rate or split applications at 2 quarts/acre (1.5 fl. oz. /1000 sq. ft.) 4-6 weeks apart.

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Apply in sufficient water to achieve thorough coverage. Do not apply more than 1 gallon of product (2 lbs. active ingredient) per acre per year regardless of pests controlled.

Use of this product on "Tifdwarf" Bermudagrass greens may result in short term discoloration of the turfgrass. Since many agronomic factors may influence this response it is recommended that users treat a small area at recommended rates prior to initiating large-scale use.

CHEMIGATION

Do not apply this product through any type of irrigation system.

FOR SOD FARMS: Allow at least 7 days to elapse between last application and harvest of sod.

DISCLAIMER

The label instructions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 use or application of the product contrary to label instructions, all of which are beyond the control of RohMid L.L.C. All such risks shall be assumed by the user.

RohMid L.L.C. warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risk referred to above.

Any damages arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or values or any other special or indirect damages.

RohMid L.L.C. makes no other express or implied warranty, including other express or implied warranty of FITNESS or of MERCHANTABILITY.

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