

PM 04
9779-5
02-16-99

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

FEB 16 1999

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Steve Rogosheske
Sr. Registration Specialist
Terra International
600 Fourth Street
P.O. Box 6000
Sioux City, IA 51102

Dear Mr. Rogosheske:

Subject: Additional Uses
Malathion 5
EPA Reg. No. 9779-5
Your Resubmission of December 4, 1998

The labeling amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, As Amended (FIFRA), is acceptable, provided that you:

Submit one copy of your final printed label incorporating the following corrections before you release the product for shipment.

1. In the added empty grain storage section, add the statement, "Do not apply directly to grain."
2. In the directions for use on peas, delete the reference to use of the vines as animal feed. They are in conflict with the required prohibition against the feeding of the vines to animals. Retain the 3-day interval as the pre-harvest interval.
3. Correct your IF SWALLOWED statement to reflect the aspiration hazard by replacing instructions to induce vomiting with instructions not to induce vomiting. We regret that this correction was not brought to your attention in our previous review of the subject product label.

If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product bearing the amended label constitutes acceptance of this condition.

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

Sincerely,



Marilyn A. Mautz
Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

R®

MALATHION 5

An emulsifiable concentrate containing 5 pounds of malathion per gallon.

ACTIVE INGREDIENT

Malathion (0,0-dimethyl phosphorodithioate of diethyl mercaptosuccinate)	56.8%
INERT INGREDIENTS*	43.2%
TOTAL	100.0%

Contains 5 pounds malathion per gallon.

*Contains 35.2% of Xylene range aromatic solvent.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

FEB 16 1993

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.9779-5**KEEP OUT OF REACH OF CHILDREN****WARNING/AVISO**

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**ORGANOPHOSPHATE****IF SWALLOWED:** Contact your local poison control center, hospital, or physician. If the patient is unconscious, maintain breathing and heartbeat (cardiopulmonary resuscitation). If the patient is conscious and alert, induce vomiting (syrup of ipecac or stimulate the back of throat with finger). Never give anything by mouth to an unconscious person.**IF INHALED:** Remove victim to fresh air and apply respiration if indicated.**IF ON SKIN:** Wash with soap and water.**IF IN EYES:** Flush with plenty of water. Get medical attention if irritation persists.**NOTE TO PHYSICIAN:** Malathion is an acetyl cholinesterase inhibitor. Atropine is antidotal.**PRECAUTIONARY STATEMENTS****HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING**

Causes substantial but temporary eye injury. Harmful if absorbed through skin. Do not get in eyes on skin or on clothing.

Personal Protective Equipment:

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear long-sleeved shirt and long pants, chemical-resistant gloves, such as Barrier Laminate, Butyl Rubber, Nitrile Rubber or Viton, shoes plus socks and protective eyewear.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Read additional PRECAUTIONARY STATEMENTS

EPA Reg. No. 9779-5

EPA Est. Nos. 9779-AR-1^P9779-AL-1^M9779-TX-3^T

(Lot no. indicates establishment.)

Manufactured For

TERRA INTERNATIONAL, INC.

P.O. Box 6000, Sioux City, Iowa 51102-6000

Riverside Serves Agriculture. Agriculture Serves Everyone.

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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. 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.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, aquatic invertebrates, and aquatic life stages of amphibians. 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 areas near the application site. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill, 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 labeling.

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

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), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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.

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 plants, soil, or water, is: coveralls, chemical-resistant gloves, such as Barrier Laminate or Butyl Rubber, Nitrile Rubber or Viton, shoes plus socks and protective eyewear.

STORAGE AND DISPOSAL

DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.

STORAGE

Store in a dry location away from children, animals, foods, feeds, seeds, or other agricultural chemicals. Handle in accordance with information given under PRECAUTIONARY STATEMENTS. In the event of spillage or leakage, soak up material with absorbent clay, sand, sawdust, or other absorbent material. Scrape up and dispose of in accordance with information given under DISPOSAL. Repackage and relabel useable products in a sound container. In case of fire or other emergency, report at once by toll-free telephone to 800-424-9300.

DISPOSAL

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Plastic Containers—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. Metal Containers—Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

GENERAL INFORMATION

MALATHION 5 may be applied by ground sprayers or by airplanes, mixing the MALATHION 5 in water to form an emulsion spray solution. To make the spray solution, half fill the spray tank with water, agitate, add the proper amount of MALATHION 5 and then fill the spray tank with water while still agitating. Continue to agitate during use.

When applying with ground sprayers, calibrate so as to apply the recommended amount of MALATHION 5 in not less than 3 gallons of water per acre. Airplanes should apply the recommended amount of MALATHION 5 in not less than 1 gallon of water per acre. Always use sufficient water for adequate coverage of the crop foliage.

The dosages given under DIRECTIONS FOR USE are the amounts of MALATHION 5 to be applied per acre treated per application. Repeat applications as necessary, unless otherwise directed in DIRECTIONS FOR USE.

Where a dosage range is given, use the lower rate on small or young plants or with light insect infestations; use the higher rate on large or more mature plants or with heavy insect infestations. The hazards and precautions for handling MALATHION 5 in this container are equally applicable to it after dilution with water for spray application.

ORNAMENTALS

Make thorough, full-coverage spray with repeated applications as necessary. For scales, apply when crawlers have settled on foliage. Injury may occur on certain ferns, including Boston, Maidenhair and Pteris, as well as some species of crassula.

Apply 1 pint per 100 gallons of water to control lacebugs and oyster shell scale. Apply 1½ pints per 100 gallons of water to control aphids, spider mites, whitefly, mealybugs, thrips, Japanese beetle adults, four-lined leaf bug, tarnished plant bug, rose leafhopper, potato leafhopper, European pine shoot moth, scurfy scale and euonymus scale.

Apply 2 pints per 100 gallons of water to control bagworms, tent caterpillar, birch leaf miner, boxwood leaf miner, oak kermes, juniper scale, Fletcher scale, Florida red scale, azalea scale, magnolia scale and pine leaf scale.

Apply 2½ pints per 100 gallons of water to control soft brown scale, Monterey pine scale and black scale crawlers.

Apply 4 pints per 100 gallons of water to control pine needle scale.

PECANS

For control of aphids, spider mites, and walnut aphid, use 1½ to 2 pints of MALATHION 5 per 100 gallons of water. For control of European red mite, use 1¼ pints per 100 gallons of water. For control of pecan phyloxera, pecan budmoth, and pecan leaf casebearer, use 1¼ pints per 100 gallons of water. Apply when buds begin to develop. Repeat as necessary. For control of pecan nut casebearer and walnut husk fly, apply 1¼ pints per 100 gallons of water after first generation eggs begin to hatch. Applications may be made on the day of harvest. Application rates are based on a standard of 500 gallons of dilute spray per acre for mature trees 25 to 35 feet high.

MOSQUITOES

OUTDOOR ADULT MOSQUITO CONTROL: For control of mosquitoes outdoors, use a 2% to 5% Malathion area or fog spray. For a 2% spray, dilute 1 part of MALATHION 5 with 28 parts of water; for 5%, dilute 1 to 11. Repeat as necessary.

Treat shrubbery and vegetation where mosquitoes may rest. Shrubby and vegetation around stagnant pools, marshy areas, ponds and shore lines may be treated. Application of this product to any body of water is prohibited.

MOSQUITO LARVAE CONTROL: For control of mosquito larvae in standing water, intermittently flooded areas, stagnant water, and temporary rain pools, apply 13 ounces of MALATHION 5 per acre. Mix in sufficient water or oil to obtain even coverage when applied by air or ground equipment. NOTE: CONTAMINATION OF SHALLOW, FISH-BEARING WATERS MAY KILL FISH. Broadcast use only over intermittently flooded areas. Application may not be made around bodies of water where fish or shellfish are grown and/or harvested commercially.

FLIES

OUTDOOR FLY CONTROL: For the control of flies around buildings which house domestic animals, around yards and around homes, apply a spray containing 2 gallons of MALATHION 5 in 100 gallons of water. Apply the spray at the rate of one gallon per 1,000 square feet on painted surfaces, and two gallons per 1,000 square feet on unpainted surfaces where flies alight or congregate. Repeat applications as necessary.

For a bait spray, use 2 gallons of MALATHION 5 with two gallons of unsulfurized molasses or corn syrup, or 20 pounds of sugar per 100 gallons of water. Use 3 gallons of this product with 40 pounds of sugar per 100 gallons if the fly population is severe. Repeat applications as necessary.

Do not use indoors. Avoid contamination of feed and food products. Do not use in dwellings. Keep out of reach of children.

GRAIN STORAGE

For the protection of stored grains, such as wheat, oats, corn, rye and barley. To control confused flour beetle, rice weevil, granary weevil, saw-toothed grain beetle, flat grain beetle, red flour beetle, rusty grain beetle, lesser grain borer, Indian meal moth and cereal leaf beetle, apply MALATHION 5 to walls, floors and machinery in grain elevators, grain bins, truck beds and box cars before loading grain. Mix one (1) gallon of MALATHION 5 with 25 gallons of water and spray surfaces to point of run-off. Clean elevators, box cars, etc. thoroughly before applying spray. Remove and burn all sweepings and debris.

CROP	INSECTS CONTROLLED	AMOUNT TO APPLY PER ACRE	PREHARVEST (DAYS) OR GRAZING INTERVALS
CITRUS			
Grapefruit, Lemons, Limes, Oranges, Tangerines	California Red Scale, Yellow Scale, Black Scale, Soft Scale, Citrocologia Scale	1½ pints	7
	Red Scale, Purple Scale	1¼ - 2 pints	
	Thrips Do not apply during full bloom.	1¼ pints	
FIELD CROPS			
Cotton For control of worms and weevils, use in combination with other recommended insecticides.	Boll Weevil	1 - 2 quarts	0
	Desert Spider Mite, Cotton Aphid, Leafhoppers, White Flies, Cotton Leafworm, Brown Cotton Leafworm, Cotton Leaf Perforator, Thrips, Lygus Bugs	1 - 2 quarts	
	Fleahoppers	1 - 1½ pints	
	Fall Armyworms, Grasshoppers, Garden Webworms	1½ - 3 pints	
FORAGE CROPS			
Alfalfa, Clover, Grass, Grass Hay, Pasture and Range Grass	Armyworms	2 - 2½ pints	0
	Grasshoppers, Aphids, Leafhoppers, Lygus Bugs, Spider Mites, Alfalfa weevil Larvae, Spittlebug	1½ - 2 pints	
GRAIN CROPS			
Barley, Corn, Oats, Rye, Wheat	Cereal Leaf Beetle	1 - 1½ pints	7 5 corn
	English Grain Aphid, Greenbugs, Grasshoppers Make full coverage to hatching areas when nymphs are young.	1¼ pints	
	Armyworms	2 pints	
	Grasshoppers, Aphids, Leafhoppers, Spider Mites, Alfalfa Weevil Larvae, Spittlebug	1½ - 2 pints	
VEGETABLES AND FRUITS			
BEANS Lima, Green, Snap, Navy, Red Kidney, Wax, Cow-peas, Black-eyed Peas	Mexican Bean Beetles	1½ pints	1
	Leafhoppers, Aphids, Cucumber Beetles, Bean Leaf Beetles, Blister Beetles, Lygus Bugs	2 pints	
	Spider Mites	1 - 1½ pints	
	Japanese Beetles Make 2 or more applications as needed.	1½ - 2 pints	
Dry Beans (California and Northwest Only)	Lygus Bugs	1½ - 2 pints (ground) 1½ pints (air) in 10 gallons of water	1 PHI Do not feed treated vines/forage to livestock or allow livestock to graze in treated fields.

CROP	INSECTS CONTROLLED	AMOUNT TO APPLY PER ACRE	PREHARVEST (DAYS) OR GRAZING INTERVALS
CELERY To be applied to fresh leaves and stalks only.	Aphids, Spider Mites	1½ pints	7
CHERRIES* *Not registered in California	Black Cherry Aphid Fruit Tree Leafroller	1½ pints/100 gal.	3
	Cherry Fruit Fly Japanese Beetle Eyespotted Bud Moth	1 pint/100 gal.	
	The rates for use on cherries are based on a standard of 400 gallons per acre dilute spray for mature trees. Do not apply more than 8 lbs. of actual MALATHION 5 per acre to cherry trees. Injury may occur on certain varieties of sweet cherries, particularly in the Northwest.		
COLE CROPS AND LEAFY VEGETABLES Broccoli, Brussels Sprouts, Cabbage, Collards, Dandelions, Kale, Kohlrabi, Mustard Greens, Parsley, Swiss Chard, Turnips, Watercress	Aphids	1½ - 2 pints	7 3 Turnips and Broccoli 21 Parsley
	Flea Beetles (on Mustard Greens only)	1½ - 2 pints	
	Imported Cabbage Worms, Diamond-Back Moth Larvae (on Cauliflower, Collards, Brussels Sprouts and Broccoli only)	2 pints	
	Harlequin Cabbage Bugs (on Collards only)	1 pint	
	Cabbage Loopers	1 - 2 pints	
	Diamondback Moths, Webworms	2 pints	
EGGPLANT	Aphids, Spider Mites	1 pint	3
	Lacebugs	3 pints	
ENDIVE	Aphids, Spider Mites	1½ - 2 pints	7
GARLIC, SHALLOTS	Aphids, Thrips	1½ - 2 pints	3
HOPS	Aphids, Spider Mites	1 pint	10
LEEKS	Aphids	1½ - 2 pints	3
	Onion maggot flies	2½ pints	
	Thrips	3 pints	
LENTILS	Cowpea aphids, Pea aphids	1½ pints	3
	Do not feed treated vines/forage to livestock or allow livestock to graze in treated fields.		
LETTUCE NOTE: For control of cabbage loopers, use in combination with other recommended insecticides	Leafhoppers, Aphids	2 pints	14-leaf 7-head
	Cabbage Loopers	3 pints	
SPINACH	Aphids	2 pints	7

CROP	INSECTS CONTROLLED	AMOUNT TO APPLY PER ACRE	PREHARVEST (DAYS) OR GRAZING INTERVALS
CUCURBITS Cucumbers, Squash, Pumpkins Do not apply unless plants are dry.	Aphids, Spider Mites, Pickleworms	1½ pints	1 Pumpkins 3
	Leaf miners	2 pints	
	Cucumber Beetles, Squash Vine Borers	3 pints	
MELONS Cantaloupes, Honeydew melons, Watermelons	Aphids, Spider Mites	1½ - 2 pints	1
	Leafhoppers, Pickleworm	2½ - 2¾ pints	
	Cucumber Beetle	2 pints	
MUSHROOMS Make thorough applications as soon after picking as possible. Repeat as necessary, usually twice a week.	Mites, Phorid and Sciarid flies	2½ pints in 130 gallons of water; or, 2 tablespoons in 3 gallons of water per 1000 square feet of bed	1
OKRA Make no application after pods start to form.	Aphids	1½ pints	1
	Japanese beetles	2 pints	
ONIONS	Onion maggots	1½ - 2½ pints	3
	Onion thrips	1½ - 2 pints	
STRAWBERRIES	Aphids, Spider Mites	1½ pints	3
	Field crickets, Lygus bugs, Spittlebugs, Thrips	1½ - 3 pints	
	Potato leafhoppers, Strawberry leafrollers, Strawberry root weevils, Whiteflies	1½ - 2½ pints	
SWEET CORN Injury may occur in the whorl or to the silks.	Japanese beetles	2 pints	5
PEPPERMINT SPEARMINT	Aphids, Flea beetles, Leafhoppers, Spider mites	1½ pints	7
PEAS	Pea Weevil	1½ - 2 pints	7 day interval if vines are to be used as animal feed. 3 day interval if vines are NOT used as animal feed.
	Do not feed treated vines/forage to livestock or allow livestock to graze in treated fields.		
PEPPERS	Aphids	1 pint	3
	Pepper maggots	2½ pints	
POTATOES	Aphids, Leafhoppers, Mealybugs	1 pint	0
	False Chinch Bugs	1½ pints	
	Grasshoppers	2 pints	

CROP	INSECTS CONTROLLED	AMOUNT TO APPLY PER ACRE	PREHARVEST (DAYS) OR GRAZING INTERVALS
RICE	Rice leaf miners. Make first application shortly after the first rice blades appear on the surface of the water and repeat if necessary.	2½ pints	7
	Rice stink bugs. Apply by airplane in 2 gallons of water per acre during the early milk and dough stage of growing rice. Repeat applications as necessary.	1 - 1½ pints	
	Broadcast use only over intermittently flooded areas. Application may not be made around bodies of water where fish or shellfish are grown and/or harvested commercially.		
ROOT CROPS Beets (table and garden)	Aphids	1½ - 2 pints	7 if tops are to be used as feed.
Horseradish, Parsnips, Radishes, Salsify	Aphids	1½ - 2 pints	7
Rutabagas	Aphids	1½ pints	3
Sweet Potatoes	Leafhoppers	1½ - 2 pints	3
	<i>Morningglory Leafhoppers</i>	2½ - 3 pints	3
TOMATOES (outdoors)	Spider Mites	1½ pints	1
	Aphids	1 pint	
	Drosophila	2½ pints	
	<i>Armyworms, Fruitworms (California only)</i>	2¼ quarts	3
GRAPES The rates for use on grapes are based on a standard of 200 gallons per acre dilute spray. Injury may occur on grapes of Almeria, Cardinal, Italia and Riberia varieties when sprays containing MALATHION 5 are applied after clusters appear.	Leafhoppers Spider mites	3 pints	3
	European Fruit Lecanium Make full coverage applications when newly hatched nymphs are migrating over vines, usually shortly after bloom.	3 pints	
	Mealybugs Apply in 50-100 gallons of water per acre.	1½ pints	

INSECTICIDE, LIQUID, NOS (CONTAINS MALATHION) COMBUSTIBLE LIQUID, NA 1993, RQ

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and Buyer assumes the risk of any such use.