



MALATHION 8-E

INSECTICIDE

Organophosphate Insecticide

AGRICULTURAL INSECTICIDE
EMULSIFIABLE LIQUID

ACTIVE INGREDIENT:		% BY WT.
Malathion (O,O-Dimethyl phosphorodithioate of diethyl mercaptosuccinate)	79.5%
OTHER INGREDIENTS:	20.5%
	TOTAL	100.00%

Contains 8 lbs. Malathion per gallon

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID

If swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have a person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 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.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Note to Physician: This material is a cholinesterase inhibitor. Treat symptomatically. Atropine is an antidote.

See Below For Additional Precautionary Statements.

EPA REG. NO. 34704-452

EPA EST. NO. 34704-MS-002

NET CONTENTS 2½ GALS. (9.46 L)

022311 V2D 06Y11

**MALATHION 8-E INSECTICIDE
EPA REG. NO. 34704-452**

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

Harmful if swallowed or absorbed through skin. Causes eye irritation. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile rubber, and viton. If you want more options, follow the instructions for category (F) on an EPA chemical resistance category selection chart.

For all formulations and all use patterns – mixers, loaders, applicators, flaggers, and other handlers must wear:

- Long sleeved shirt and long pants,
- Shoes plus socks, and
- Chemical resistant gloves.

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

See engineering controls for additional requirements.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on this labeling for applicators.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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 pesticide is toxic to aquatic organisms, including fish and invertebrates.

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff after application. Use care when applying in or to an area which is adjacent to any body of water, and do not apply when weather conditions favor drift from target area. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

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 when disposing of equipment washwater or rinsate. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters.

This pesticide 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 while bees are actively visiting the treatment area.

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For commercial, industrial, and institutional use products packaged in containers equal or greater than 5.0 gallons or 50.0 pounds:

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

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 labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. 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.

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 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 (REI). 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). **The REI for each crop is listed in the directions for use associated with each crop.**

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,
- Shoes plus socks, and
- Chemical-resistant gloves made of any waterproof material.

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 or nurseries.

Do not enter or allow others to enter until sprays have dried.

PRECAUTIONS AND RESTRICTIONS

BUFFER ZONES FOR AERIAL APPLICATION: When making a Non-ULV application with aerial application equipment, a minimum buffer zone of 25 feet must be maintained along any water body.

SPRAY DRIFT REQUIREMENTS

Observe the following requirements when spraying in the vicinity of aquatic areas such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds. **Droplet Size** – Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

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For groundboom and aerial applications, use only medium or coarser spray nozzles according to ASAE (S572) definition for standard nozzles, or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Wind Direction and Speed – Make aerial or ground applications when the wind velocity favors on target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph. For all non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

Temperature Inversion – Do not make aerial or ground applications into areas of temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Additional Requirements for Ground Applications – Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided. For groundboom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy.

Additional Requirements for Aerial Applications – For aerial applications, the spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or 90% rotor diameter.

Aerial applicators must consider flight speed and nozzle orientation in determining droplet size.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

APPLICATION THROUGH IRRIGATION SYSTEMS – CHEMIGATION

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; flood (basin); furrow; border or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions and calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Mix in clean supply tank the recommended amount of this product for acreage to be covered, and needed quantity of water.

This product should not be tank-mixed with other pesticides, surfactants or fertilizers unless prior use has shown the combination noninjurious under your conditions of use.

Follow precautionary statements and directions for all tank-mixed products.

On all crops, use sufficient gallonage of water to obtain thorough and uniform coverage, but not cause runoff or excessive leaching. This will vary depending on equipment, pest problem and stage of crop growth. Application of more or less than optimal quantity of water may result in decreased chemical performance, crop injury or illegal pesticide residues.

Meter this product into the irrigation water uniformly during the period of operation. Do not overlap application. Follow specified label rates, application timing, and other directions and precautions for crop being treated.

Continuous mild agitation of pesticide mixture may be needed to assure a uniform application, particularly if the supply tank requires a number of hours to empty.

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CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Note: Loveland Products Inc. does not encourage connecting chemigation systems to public water supplies. The following information is provided for users who have diligently considered all other application and water supply options before electing to make such a connection.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the flow fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

SPRINKLER CHEMIGATION (FOLIAR SPRAY USES)

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

FLOOD (BASIN), FURROW AND BORDER CHEMIGATION (SOIL DRENCH USES)

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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- c. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

DRIP (TRICKLE) CHEMIGATION (SOIL DRENCH USES)

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

APPLICATIONS

Pour specified amount of this product into nearly filled spray tank. Add balance of water to fill tank. Keep agitator running during filling and spraying operations. If mixture does not mix readily, but tends to separate as an oily layer, do not use as injury to plants may result. Do not combine with wettable powders unless previous use of the mixture has proved physically compatible and safe to plants. Always thoroughly emulsify this product with at least half of total water before adding wettable powder.

In order that pesticidal residues on food and forage crops will not exceed tolerances established by the Federal Food, Drug, and Cosmetic Act, use only at specified rates and intervals, and do not apply closer to harvest than specified. **The grower is responsible** for residues on his crops as well as for damages caused by drifting from his property to that of others.

Consult State Agricultural Experiment Stations or the State Agricultural Extension Services for additional information as to the timing, number and rate of applications needed will vary with local conditions.

TREE FRUIT CROP

Use rates and use directions as noted below. Use higher rate when foliage is heavy or infestation is severe. Unless otherwise specified, rates are given in terms of pints of Malathion 8-E Insecticide in a minimum of 10.0 gallons of spray per acre for tree and orchard uses (standard is 100 gallons of water for thorough coverage sprays). Unless otherwise specified, apply at the first sign of infestation.

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Crop	Pest	Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Grapefruit Oranges Tangerines Tangelos	Aphids Black scale (single and off-brooded) California red scale Citricola scale Orangeworm Purple scale Soft scale Thrips Yellow scale	CA Only: 7.5 pts or 1.5 pts; All other states: 4.5 pts or 1.5 pts	Do not apply during full bloom. California Only: At the maximum application rate of 7.5 lbs AI/A (7.5 pts Malathion 8-E Insecticide) the Restricted Entry Interval (REI) is 72 hrs and the maximum number of applications/yr is 1. OR At the maximum application rate of 1.5 lbs AI/A (1.5 pts Malathion 8-E Insecticide), the REI is 12 hrs, the maximum number of applications/yr is 3 and the minimum application interval is 30 days. All States other than CA: At the maximum application rate of 4.5 lbs AI/A (4.5 pts Malathion 8-E Insecticide), the Restricted Entry Interval (REI) is 72 hrs and the maximum number of applications/yr is 1. OR At the maximum application rate of 1.5 lbs AI/A (1.5 pts Malathion 8-E Insecticide), the REI is 12 hrs, the maximum number of applications/yr is 3 and the minimum application interval is 30 days.	7

VEGETABLE AND FIELD CROPS

Use rates and use directions as noted below. Use higher rate when foliage is heavy or infestation is severe. Apply when pests first appear. Apply the following specified rates in sufficient water to thoroughly cover one acre. By ground, apply using a minimum of 10.0 gallons of water per acre and by air, apply using a minimum of 2.0 gallons of water per acre (standard is 100 gallons of water for thorough coverage sprays). Unless otherwise specified, apply at the first sign of infestation.

Crop	Pest	Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Alfalfa Clover	Alfalfa weevil larvae Aphids Armyworms Clover leaf weevils Grasshoppers Leafhoppers (including Potato leafhoppers) Lygus bugs Pea aphids Spider mites Spittlebugs Vetch bruchid	1.0 to 1.25	Use higher rate for Armyworm control. Apply to alfalfa in bloom only in the evening or early morning when bees are not working in the fields or are not hanging on the outside of hives. The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8-E Insecticide); the maximum number of applications is 2/cutting; and the minimum retreatment interval is 14 days.	0
Barley	Armyworms English grain aphids Grasshoppers Greenbugs	1.0 to 1.25	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pt Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 7 days.	7

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Vegetable & Field Crops cont'd.:

Crop	Pest	Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Cotton	Aphids Brown cotton leafworm Cotton leaf perforator Leafhoppers Spider mites Whitefly	0.33 to 1.5	The Restricted Entry Interval (REI) is 48 hrs. The maximum application rate is 2.5 lbs AI/A (2.5 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 3; and the minimum retreatment interval is 7 days.	0
	Cotton aphids Thrips	1.0		
	Cotton fleahoppers	0.75 to 1.0		
	Boll weevils Fall armyworms Garden webworms Grasshoppers Lygus bugs	1.0 to 2.0		
Cucumbers	Aphids Cucumber beetle Cutworms Darkling ground beetles Leafhoppers Pickleworms Spider mites Squash vine borer Thrips	1.75	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.75 lbs AI/A (1.75 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 7 days.	1
Endive	Aphids Alfalfa looper Cabbage looper Leafhoppers Mites	1.0 to 1.25	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 7 days.	7
Grapes	European fruit lecanium Grape leafhopper Mealybug Spider mites	1.0 to 1.88	Injury may occur to Ribier, Cardinal and Almeria grapes varieties when applications are made after the clusters appear. The Restricted Entry Interval (REI) is 72 hrs for girdling and tying, and 24 hrs for all other activities. The maximum application rate is 1.88 lbs AI/A (1.88 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 14 days. The standard dilute spray for this crop is 200 gals/A.	3
Grass, Grass Hay	Aphids Leafhoppers	1.0 to 1.25	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 1.	0
Lettuce	Aphids Alfalfa Looper Leafhoppers Cabbage Looper Mites	1.0 to 1.88	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.88 lbs AI/A (1.88 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 6 days for head and 5 days for leaf.	14

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Vegetable & Field Crops cont'd.:

Crop	Pest	Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Oats	Armyworms English grain aphids Grasshoppers Greenbugs	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 7 days.	7
Peppers	Aphids Pepper maggots	1.0 to 1.56	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 5 days.	3
Potatoes	Aphids Blister beetle False chinch bugs Leafhoppers Mealybugs	1.0 to 1.5	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 7 days.	0
Rye	Armyworms English grain aphids Grasshoppers Greenbugs	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8-E Insecticide); the maximum number of applications/yr is 3; and the minimum retreatment interval is 7 days.	7
Squash	Aphids Cucumber beetles Cutworms Darkling ground beetles Leafhoppers Pickleworms Spider mites Squash vine borer Thrips	1.0	Do not apply unless plants are dry. For Summer Squash , the Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.75 lbs AI/A (1.75 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 3; and the minimum retreatment interval is 7 days. For Winter Squash , the Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8-E Insecticide); the maximum number of applications/yr is 3; and the minimum retreatment interval is 7 days.	1
Strawberries	Aphids Field crickets Lygus bugs Potato leafhoppers Spider mites Spittlebugs Strawberry leafrollers Thrips Whitefly	1.5 to 2.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 2.0 lbs AI/A (2.0 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 4; and the minimum retreatment interval is 7 days.	3
Tomatoes	Aphids Drosophila flies Spider mites	1.5	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8-E Insecticide); the maximum number of applications/yr is 4; and the minimum retreatment interval is 5 days.	1

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Vegetable & Field Crops cont'd.:

Crop	Pest	Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Wheat (spring & summer)	Armyworms English grain aphids Grasshoppers Greenbugs	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8-E Insecticide); the maximum number of applications/yr is 2; and the minimum retreatment interval is 7 days.	7

OUTDOOR ORNAMENTALS

Crop	Rate	Pests	Comments
Ornamental and/or shade trees, ornamental herbaceous/nonflowering plants, ornamental woody shrubs and vines	1.0 pt in 100 gals of water as a dilute spray	Aphids Euonymus scale European pine shoot moth Four-line leaf bug Japanese beetle adults Lace bug Mealybugs Millipedes Oyster shell scale Potato leafhopper Rose leafhopper Sawflies Scurfy scale Spider mites Springtails Sowbugs Tarnished plant bug Thrips Whiteflies	For Oyster shell, Fletcher, Juniper, Oak kermes and Pine needle scales, apply when scale crawlers have settled on forage. CAUTION: Avoid use on certain ferns including Boston, Maidenhair and Pteris, as well as some species of Crassula and Canaetri Juniper. Restricted Entry Interval is 12 hrs. Maximum of 2 applications/yr/growing cycle. 10 day minimum retreatment interval.
	1.25 pts in 100 gals of water as a dilute spray	Azalea scale Bagworm Birch leafminer Boxwood leafminer Fletcher scale Florida-red scale Juniper scale Magnolia scale Oak kermes Pine leaf scale Tent caterpillar	
	1.6 pts in 100 gals of water as a dilute spray	Black scale crawler Monterey pine scale	
	2.5 pts in 100 gals of water as a dilute spray	Pine needle scale Wax scale	

FLY CONTROL

Amount of Spray	Amount Malathion 8-E Insecticide	Directions for Use
1.0 gal	1.2 fl ozs	For use along outside lower foundation of home and around yards (spot treatment only). Apply spray at rate of 1.0 gal/1,000 sq ft on painted surfaces and 2.0 gals/1,000 sq ft on unpainted surfaces where flies alight or congregate.
10.0 gals	12.0 fl ozs	
100 gals	7.5 pts	

Add the following sugar or unsulfurized molasses/corn syrup to the following spray.

Amount of Spray	Amount of Sugar	Amount of Unsulfurized Molasses/ Corn Syrup
1.0 gal	1/2 cup	4.0 fl ozs
10.0 gals	2.0 lbs	26.0 fl ozs
100 gals	20.0 lbs	2.0 gals

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Cull Fruit and Vegetable Dumps: On cull fruit and vegetable dumps, mix 7.5 pints in 100 gallons of water and apply as a drench, using 8.0 to 10.0 gallons of spray per 100 square feet. Not for use on dumps over 18 inches deep. Do not feed treated fruit and vegetables.

**MOSQUITO CONTROL
DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For use by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

When applying as a wide area mosquito adulticide, before making the first application in a season, it is advisable to consult with the state or tribal agency charged with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

ENVIRONMENTAL HAZARDS FOR WIDE AREA MOSQUITO ADULTICIDE USE

This pesticide is toxic to aquatic organisms, including fish and invertebrates.

When applying as a wide area mosquito adulticide, before making the first application in a season, it is advisable to consult with the state or tribal agency charged with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply or allow it to drift onto blooming crops or weeds while bees are actively visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local public health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort. When applying as a wide area mosquito adulticide, do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

PRECAUTIONS AND RESTRICTIONS

- Do not apply more than 0.23 pound active ingredient per acre per day.
- Only treat when mosquitoes are swarming or biting. Do not re-treat a site more than 3 times in any one week.
- However, more frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne diseases in animal or human populations, or if specifically approved by the state or tribe during a natural disaster effort.
- Apply when wind speed is greater than or equal to 1 mph.
- Do not apply by fixed wing aircraft at height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.

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- Before using, read the directions contained in this labeling for the proper methods and procedures which must be followed to achieve effective insect control and avoid permanent damage to automobile and other paint finishes. **IMPORTANT:** IN AREAS WHERE AUTOMOBILES, TRAILERS, TRUCKS AND PLEASURE BOATS ARE PRESENT, undiluted spray droplets of Malathion 8-E Insecticide will permanently damage vehicle paint finishes unless the aircraft used for the ultra low volume application meets all of the specifications listed below.

AERIAL APPLICATION

Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 100 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle, and the nozzle flow rate(s) are properly calibrated.

GROUND BASED APPLICATION

Spray equipment must be adjusted so that the volume median diameter is less than 30 microns (Dv 0.3 < 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Thermal Aerosols or Fogs

For control of adult mosquitoes with thermal aerosols or fog, apply Malathion 8-E Insecticide at the rate of 0.23 pints in 100 gallons finished solution* by ground equipment delivering 40.0 gallons per hour at a vehicle speed of 5 mph to treat a swath width of 300 feet (equivalent to 180 acres per hour). At 0.23 pints Malathion 8-E Insecticide per 100 gallons of finished solution, this is equivalent to 0.23 pound active ingredient per acre.

*There is a great variation in the chemical composition of fuel oils which may be used as thermal fog solvents. These differences may cause sludge and/or affect the solubility of the Malathion 8-E Insecticide.

Nonthermal Aerosols

Control of adult mosquitoes over a 300-foot swath can be obtained with non-thermal aerosols of Malathion 8-E Insecticide using the following rates at the indicated vehicle speeds.

Dilution Rates for Malathion 8-E Insecticide

Undiluted
Apply as follows:

Lb AI/A	Application Rates Fl Oz/Min at Vehicle Speeds				Fl Oz of finished spray/A
	5 mph	10 mph	15 mph	20 mph	
0.03 to 0.06*	2.3 to 4.5	4.5 to 9.0	6.8 to 13.5	9.0 to 18.0	0.75 to 1.5

For A 1:2 Dilution
Mix 1 part Malathion 8-E Insecticide with 2 parts Suitable Fuel Oil or Water
Apply as follows:

Lb AI/Acre	Application Rates Fl Oz/Min at Vehicle Speeds				Fl Oz of finished spray/A
	5 mph	10 mph	15 mph	20 mph	
0.03 to 0.06*	9.0 to 18.0	18.0 to 36.0	27.0 to 54.0	36.0 to 72.0	3.0 to 6.0

*Use higher rate of application when vegetation is dense and/or mosquito populations are heavy.

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**For A 1:4 Dilution
Mix 1 part Malathion 8-E Insecticide with 4 parts Suitable Fuel Oil or Water
Apply as follows:**

Lb AI/Acre	Application Rates Fl Oz/Min at Vehicle Speeds				Fl Oz of finished spray/A
	5 mph	10 mph	15 mph	20 mph	
0.03 to 0.06*	11.25 to 22.5	22.5 to 45.0	33.75 to 67.5	45.0 to 90.0	3.75 to 7.5

*Use higher rate of application when vegetation is dense and/or mosquito populations are heavy.

OPERATING EQUIPMENT

Each nonthermal aerosol generator used for dispersal of Malathion 8-E Insecticide to control adult mosquitoes must have minimum capability of producing the droplet spectrum described under **Ground-Based Application**. The initial determination of droplet size is made after the unit is installed in a vehicle and prior to its use in mosquito control operations. Recheck the unit frequently to insure that proper droplet size is maintained for each operation. Determination of droplet size every two months is usually sufficient if the unit has been maintained in good operating condition. Equipment manufacturer's instructions setting forth cleaning and maintenance of the unit must be followed. The unit must be inspected before each operation to correct any leaks or obstructions in the spray system; to detect whether the nozzle, hoses, or other parts are worn and need replacement; to insure that the flow meter is properly calibrated; and to determine that the pressure recommended by the manufacturer is being maintained.

Flow Rate - must be regulated by accurate flow meter.

- not greater than 1.0 gallon per hour at 5 mph, 2.0 gallons per hour at 10 mph, 3.0 gallons per hour at 15 mph, or 4.0 gallons per hour at 20 mph.

Nozzle Direction - rear of the vehicle.

- upward at an angle of 45 degrees or more.

Vehicle Speed - not greater than 20 mph.

- shut off spray equipment when vehicle is stopped.

IMPORTANT – Spray droplets of undiluted Malathion 8-E Insecticide will permanently damage automobile paint unless all the conditions described and recommended in this label are met. If accidental exposure does occur, the vehicle should be washed at once.

MOSQUITO CONTROL IN POPULATED AND RURAL AREAS

Adult mosquito control over cities, towns, and other areas where automobiles, trailers, trucks, and pleasure boats are present: Apply 3.6 fluid ounces Malathion 8-E Insecticide only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.

Adult Mosquitoes on Rangeland, Pasture, and Other Uncultivated Non-Agricultural Areas (Wastelands, Roadsides)

Apply Malathion 8-E Insecticide at the rate of 2.8 fluid ounces in 2.0 to 8.0 quarts of water per acre for control of adult mosquitoes. Application may be made via ground or aerial equipment. This product can be mixed with a synergized pyrethrin emulsifiable concentrate (such as 6% pyrethrin + 60% PBO) in accordance with the most restrictive of label limitations and precautions indicated on both this and the tank-mixed product. Label rates must not be exceeded. This product may not be mixed with any product bearing a label which specifically prohibits such mixing. Prior to tank mixing large quantities mix a small amount in a glass jar to verify that the products are physically compatible.

Depending upon your operation needs, the amount of synergized pyrethrin can be reduced or adjusted. Application rates of this product and droplet distribution requirements remain the same as for this product used alone.

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STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage and disposal. Open dumping is prohibited. Do not reuse empty container. Do not store under conditions which might adversely affect the container or its ability to function properly.

PESTICIDE STORAGE: Malathion 8-E Insecticide should be stored in the original unopened container in a secure, dry place. Do not contaminate with other pesticides or fertilizers. The product should never be heated above 55 °C (131 °F), and should not be stored for long periods of time at a temperature in excess of 25 °C (77 °F). Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

PESTICIDE 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: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available.

Containers equal to or less than 5 gallons: Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 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.

For containers greater than 5 gallons or 50 pounds: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 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.

For refillable containers: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use.

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EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

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LOVELAND PRODUCTS, INC.
P.O. BOX 1286, GREELEY, COLORADO 80634-1286**