

CHEMINOVA MALATHION 57%

ORGANOPHOSPHATE

ACTIVE INGREDIENTS:

Malathion* 57.00%

INERT INGREDIENTS: 43.00%

TOTAL: 100.00%

*O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate

** Contains Petroleum Distillate

(1 gallon contains 5.0 pounds of malathion)

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 the label, find someone to explain it to you in detail.)

**IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE,
DAY OR NIGHT 1-866-303-6950**

Read the entire label before using this product. Use only according to label instructions.

Read the WARRANTY DISCLAIMER, INHERENT RISKS OF USE, and LIMITATION OF REMEDIES before buying or using.

If terms are not acceptable, return product unopened without delay.

SEE LABEL BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS.

SEE FIRST AID STATEMENT IN BOOKLET.

EPA Reg. No. 67760-40

EPA Est. No. 39578-TX-1

NET CONTENTS: 2.5 Gallons

Manufactured for:
Cheminova, Inc.
P.O. Box 110566

Research Triangle Park, NC 27709

 **CHEMINOVA**
HELPING YOU GROW

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS WARNING

Causes substantial but temporary eye injury. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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

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

- long sleeved shirt and long pants
- shoes and socks
- chemical resistant gloves (pilots must wear chemical resistant gloves only when entering or exiting the aircraft)

For all dip applications – mixers, loaders, and applicators must wear:

- long sleeved shirt and long pants
- shoes and socks
- chemical resistant gloves
- chemical resistant apron

For all air blast applications – applicators must wear:

- long sleeved shirt and long pants
- shoes and socks
- chemical resistant gloves (pilots must wear chemical resistant gloves only when entering or exiting the aircraft)
- chemical resistant apron

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.

ENGINEERING CONTROL STATEMENTS

Pilots must use an enclosed cockpit in a manner that is consistent 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.

FIRST AID

This product is an organophosphate and a cholinesterase inhibitor.

IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.

NOTE TO PHYSICIAN: Malathion is a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing cardiac and respiratory depression. Antidote: Administer atropine sulphate in large doses, TWO to FOUR mg intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until signs of atropinization appear. 2-PAM chloride is a pharmacological antidote and may be administered as an adjunct to, but not a substitute for, atropine, which is a symptomatic and often lifesaving antidote. DO NOT GIVE MORPHINE OR TRANQUILIZERS. At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of malathion may occur and relapse may occur after initial improvement. VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS. Contains Petroleum Distillate. May pose an aspiration pneumonia hazard.

ENVIRONMENTAL HAZARDS

This product 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 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 product 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.

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.

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.

PHYSICAL OR CHEMICAL HAZARDS

Flammable. Do not use or store near heat or open flame, including pilot lights.

STORAGE AND DISPOSAL

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

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).

PESTICIDE STORAGE:

Cheminova Malathion 57% 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).

Container Disposal:

Nonrefillable containers equal to or less than 5 gallons:

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container 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 ¼ 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.

Nonrefillable containers greater than 5 gallons:

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into the application equipment or a mix tank. Fill the container ¼ 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 and store rinsate for later use or disposal. Repeat this procedure two more times.

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. 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 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
- Chemical Resistant gloves such as Barrier Laminate, or Butyl Rubber or Nitrile Rubber, or Viton
- 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, or nurseries. Do not enter or allow others to enter until sprays have dried.

PRECAUTIONS AND RESTRICTIONS

Do not permit spray to contact auto vehicles as paint finish could be permanently damaged. If vehicles come into contact with spray, wash immediately.

Do not use this product for any uses other than those specified on this label.

For proper mixing, fill the spray tank at least ¾ filled with water before Cheminova Malathion 57% is added. Mechanical agitation or recirculation through the pump by-pass to the tank is usually sufficient for maintaining a good dispersion. Rinse empty container with water and drain into spray tank - repeat twice more. Repeat applications may be made as indicated. Consult your State Agricultural Experiment Station for proper timing of applications.

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.

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.

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.

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

For groundboom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy.

For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the 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. 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.

Apply only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.

Mist blowers and boom sprayers utilizing a controlled air flow to facilitate particle size and spray deposition may be used at a vehicle speed of 4 to 10 mph.

Mist blowers with a pump capable of producing 40 psi and blower speeds of 2600 rpm are satisfactory. Use flat fan nozzles, 8001 to 8002, placed 30° into air blast, or rotary atomizers placed into the air blast that produce an efficient spray particle with a mass median diameter of 30 to 100 microns. Other similar application equipment which has demonstrated the capability to deliver even distribution of the labeled rate over the desired area may be used.

Boom sprayers with a filtered rotary air compressor, either PTO or gas engine driven or an air pump capable of producing at least 12 psi are satisfactory. Use air pressure on chemical tanks and an accurate metering valve to assure a calibrated flow of the pesticide. Air should be regulated with a relief valve and gauge for proper air and liquid mixture. Pneumatic-type spray nozzles, as suggested by equipment manufacturer, should be used for spray particles with mass median diameter of 30 - 100 microns.

AGRICULTURAL USES

Make application to agricultural sites using a minimum of 30 (ground) or 5 (aerial) gallons of water/A unless otherwise noted in the table directly below. When application rate range is given use the higher rate under heavy pest pressure.

Crop	Pests Controlled	Rate/Acre	Max. Single App. Rate (lb ai/A)	Max. # of App. per year	Min. App. Interval (days)	Min. Pre-Harvest Interval (days)	Restricted Entry Interval (days)
Alfalfa	Alfalfa weevil larvae*; aphids; grasshoppers; lygus bugs; potato leaf hoppers; spider mites; spittlebugs; stink bugs; pea aphid Armyworms Clover leaf weevil Vetch buchid	1.5-2 pints 2 pints 1.5 pints 2 pints	1.25	2 per cutting	14	0	12 hrs
<ul style="list-style-type: none"> Apply to blooming alfalfa only in early morning or evening when bees are not working field or not hanging on outside of hives. *Apply when day temperature is expected to be above 65°F and when 50-70% of leaves show damage. 							
Apricots	Aphids; codling moth; European fruit lecanium; orange tortrix; soft brown scale; terrapin scale	2.4 pints	1.5	2	7	6	12 hrs
Asparagus	Asparagus aphid Asparagus beetle Thrips	2 pints 2 pints 1.5-2 pints	1.25	2	7	1	12 hrs
Avocado	Greenhouse thrips latnia scale; omnivorous looper; orange tortrix; soft brown scale	7.5 pints	4.7	2	30	7	2 days
<ul style="list-style-type: none"> Application rates are based on a standard dilution rate of 500 (ground) gallons of water/A. 							
Barley	Cereal leaf beetle; English grain aphids; grasshoppers; greenbugs; winter grain mites	1-2 pints	1.25	2	7	7	12 hrs
Beets, garden	Aphids	1.5-2 pints	1.25	3	7	7	12 hrs
<ul style="list-style-type: none"> Do not apply to Sugar Beets. 							
Blueberry (high bush and low bush)	Blueberry maggots; cherry fruit worm; cranberry fruit worm; Japanese beetle	2 pints	1.25	3	5	1	12 hrs
<ul style="list-style-type: none"> The rates for use on blueberries are based on a standard of 200 gallons per acre dilute spray. 							
Broccoli; Chinese Broccoli; Broccoli Rabb	Aphids; cabbage looper; imported cabbageworm; carrot weevil; flea beetle	1-2 pints	1.25	2	7	2	2 days
Brussels sprouts	Aphids; cabbage looper; imported cabbageworm; carrot weevil; flea beetle	1-2 pints	1.25	2	7	2	2 days
Cabbage; Chinese cabbage	Aphids; cabbage looper; imported cabbageworm; diamondback moth; webworm; carrot weevil; flea beetle	1-2 pints	1.25	6	7	7	2 days

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Crop	Pests Controlled	Rate/Acre	Max. Single App. Rate (lb ai/A)	Max. # of App. per year	Min. App. Interval (days)	Min. Pre-Harvest Interval (days)	Restricted Entry Interval (days)
• For caterpillars on summer and fall plantings, begin when true leaves appear. On other plantings and for other insects, apply when insects appear.							
Cantaloupe	Aphids; spider mites; cucumber beetles; leaf miners; leafhoppers; pickleworms; squash vine borer	1.6 pints	1.0	2	7	1	12 hrs
Caneberries (blackberry; boysenberry; dewberry; gooseberry; loganberry; raspberry)	Aphids; rose scale chafers; Japanese beetle; leafhoppers; mites; thrips	3.2 pints	2.0	3	7	1	12 hrs
• Application rates are based on a standard dilution rate of 200 (ground) gallons of water/A.							
Carrots	Aphids; leafhoppers	1.5-2 pints	1.25	2	7	7	24 hrs
Cucumber	Aphids; pickleworms; spider mites; cut worms; darkling ground beetle; leafhoppers; squash vine borer; thrips	1.5-2.8 pints	1.75	2	7	1	24 hrs
Cauliflower	Aphids; cabbage looper; imported cabbageworm; diamondback moth; webworm; carrot weevil; flea beetle	1-2 pints	1.25	2	7	2	2 days
Celery	Aphids; spider mites	2.4 pints	1.5	2	7	7	24 hrs
Cherries (sweet and tart)	Black cherry aphid; fruit tree leafroller; Japanese beetle; cherry fruit fly; eyespotted bud moth	2.8 pints	1.75	4	3	3	12 hrs
• Application rates are based on a standard dilution rate of 400 (ground) gallons of water/A for mature trees. Injury may occur on certain varieties of sweet cherries.							
Citrus Fruits (grapefruit, lemon; lime; orange; tangerine; tangelo)	Thrips; California red scale; yellow scale; purple scale; black scale; soft scale; citricola scale	All States other than CA:					
		7.2 pints or 2.5 pints	4.5 or 1.5	1 3	N/A 30	7	3 days or 12 hrs
		CA only:					
		12 pints or 2.4 pints	7.5 or 1.5	1 3	N/A 30	7	3 days or 12 hrs
• Use the higher rate for heavy infestation. • Apply with sufficient water to obtain full coverage of foliage. Apply in a minimum of 100 gallons of water per acre by ground, and up to 500 gallons of water per acre for mature trees. Use higher volumes of water as appropriate to ensure thorough coverage of foliage, depending on density and size of area to be treated.							

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Crop	Pests Controlled	Rate/Acre	Max. Single App. Rate (lb ai/A)	Max. # of App. per year	Min. App. Interval (days)	Min. Pre-Harvest Interval (days)	Restricted Entry Interval (days)
Clover	Alfalfa weevil larvae; aphids; grasshoppers; lygus bugs; potato leaf hoppers; spider mites; spittlebugs; stink bugs; pea aphid	1.5-2 pints	1.25	2 per cutting	14	0	12 hrs
	Armyworms Clover leaf weevil Vetch buchid	2 pints 1.5 pints 2 pints					
<ul style="list-style-type: none"> Do not apply to clover in bloom. 							
Collards	Aphids; harlequin cabbage bug; smaller cabbage looper; leaf hoppers; leaf miners	1.5 pints	1.0	3	7	7	12 hrs
Corn (field)	Aphids; corn earworms; corn rootworm adults; young grasshoppers; sap beetle; thrips; smaller armyworms; leaf hopper	1.5 pints	1.0	2	7	7	3 days for detassling; 12 hrs for all other activities
Corn (sweet and pop)				2	5	5	3 days for detassling; 12 hrs for all other activities
<ul style="list-style-type: none"> For corn earworm and sap beetles, treat when 10% of the ears show silk. Injury may occur in the whorl silk stages. 							
Chayote fruit	Aphids; pickleworms; spider mites; cut worms; darkling ground beetle; leafhoppers; squash vine borer; thrips	1.5-2.8 pints	1.75	2	7	1	24 hrs
Chayote root	Aphids; pickleworms; spider mites; cut worms; darkling ground beetle; leafhoppers; squash vine borer; thrips	1.5-2.5 pints	1.56	2	7	1	24 hrs
Chestnut	Mites	1.5-4 pints	2.5	3	7	2	24 hrs
<ul style="list-style-type: none"> Treat when mites appear in numbers and repeat in 7-10 days. Do not treat after shucks split. 							
Cotton	Brown cotton leafworm; cotton aphid; cotton leafworm; cotton leaf perforator; desert spider mite; leafhoppers; lygus bugs; thrips; whiteflies; fall armyworms; garden webworms; grasshoppers	1.5-4 pints	2.5	3	7	7	2 days
	Boll weevil	2-4 pints					
	Cotton fleahoppers	1-1.5 pints					
	Lygus bugs; thrips	4 pints					
<ul style="list-style-type: none"> Use higher rates for larger insects or heavy infestations. 							

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Crop	Pests Controlled	Rate/Acre	Max. Single App. Rate (lb ai/A)	Max. # of App. per year	Min. App. Interval (days)	Min. Pre-Harvest Interval (days)	Restricted Entry Interval (days)
Currant	Rose chafer mites	2 pints	1.25	3	7	1	12 hrs
• Application rates are based on a standard dilution rate of 200 (ground) gallons of water/A.							
Dandelion	Aphids	1.5-2 pints	1.25	2	7	7	24 hrs
Eggplant	Aphids; spider mites	1.6-2.5 pints	1.56	4	5	3	12 hrs
Endive (escarole)	Aphids; spider mites	1.5-2 pints	1.25	2	7	7	24 hrs
Figs	Dried fruit beetle; vinegar flies	3.2 pints or 2.4 pints + 1-2 gal. sulfured molasses	2.0 or 1.5	2	5	5	24 hrs or 12 hrs
Garlic	Aphids; thrips	1.5-2.5 pints	1.56	3	7	3	24 hrs
Grains, stored (barley, corn, oats, rye, wheat)	Cereal leaf beetle; confused flour beetle; flat grain beetle; granary weevil; Indian meal moth; lesser grain borer; maize weevil; red flour beetle; rice weevil; rusty grain beetle; saw-toothed grain beetle	Mix 8 pints/25 gallons of water. Apply 3 gallons per 1000/ft	0.6 lb ai/1000 ft	1 per storage period	N/A	N/A	12 hrs
<ul style="list-style-type: none">• Do not apply directly to grain.• Before applying spray, clean thoroughly.• Remove and burn all sweeping and debris.• For a residual wall, floor and machinery spray in grain elevators and silos, before loading grain, make a thorough application.							
Grapes (raisin, table, wine)	Leafhoppers; spidermites; European fruit lecanium*; Drosophilia; Japanese beetle; terrapin scale	3 pints	1.88	2	14	3	3 days for girdling and tying
Grape Vines (overwintering on nursery stock only)	Mealybugs	1 ½ pints					24 hrs for all other activities
	Grape phylloxera	3 pints per 200 gallon					
<ul style="list-style-type: none">• Application rates are based on a standard dilution rate of 200 (ground) gallons of water/A.• Injury may occur on grapes of Almeria, Cardinal, Italia and Ribier varieties when sprays containing Cheminova Malathion 57% are applied after clusters appear.• Remove excess soil from roots and submerge entire root system in the Malathion solution for 5 minutes.• Agitate solution at all times.* Make full coverage applications when newly hatched nymphs are migrating over vines, usually shortly after bloom.							
Grass, forage, hay (Bermuda, barnyard grass, canary grass, fescue, orchardgrass, red top, timothy, yellow foxtail)	Cereal leaf beetle; aphids; leafhoppers; grasshoppers	2 pints	1.25	1 per cutting	N/A	0	12 hrs
Guava	Drosophila	1.5-2 pints	1.25	13	3	2	12 hrs

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• Apply with 1 lb. partially hydrolyzed yeast protein or enzymatic yeast hydrolyzate.							
Hops	Aphids; spider mites	1 pint	0.63	3	7	10	12 hrs
Horseradish	Aphids; diamondback moth; flea beetles; leafhoppers	1.5-2 pints	1.25	3	7	7	24 hrs
Kale	Aphids; cabbage looper; imported cabbageworm; webworm; diamondback moth	1.5 pints	1.0	3	5	7	12 hrs
Kohlrabi	Aphids; cabbage looper; imported cabbageworm; diamondback moth; webworm; carrot weevil; flea beetle	1-2 pints	1.25	2	7	7	24 hrs
Leek	Aphids Onion maggot flies	1.5-2.5 pints	1.56	2	7	3	24 hrs
Lespedeza	Alfalfa caterpillars*; Alfalfa weevil larvae**; Grasshoppers; aphids; leafhoppers; lygus bugs	2 pints	1.25	2 per cutting	14	0	12 hrs
• Do not apply to Lespedeza in bloom. *Apply when larvae are small. **Apply when day temperature is expected to be above 65°F and when 50-70% of leaves show damage.							
Lettuce (head)	Aphids; leafhoppers;	3 pints	1.88	2	6	14	24 hrs
Lettuce (leaf)	Spider mites; cabbage looper	2.5-3 pints		2	5	14	
Macadamia nut	Green stink bugs	1.5 pints	0.94	6	7	1	12 hrs
• No more than 5.6 lbs. of actual Cheminova Malathion 57% per acre should be applied to macadamia nut trees.							
Mango	Drosophila;	1.5 pints	0.94	10	7	1	12 hrs
• Apply with 1 lb. partially hydrolyzed yeast protein or enzymatic yeast hydrolyzate.							
Melons (other than watermelon)	Aphids; spider mites; cucumber beetles; leaf miners; leafhoppers; pickleworms; squash vine borer	1.6 pints	1.0	2	7	1	12 hrs
Mint	Aphids; flea beetles; leafhoppers; spider mites; caterpillars	1.5 pints	0.94	3	7	7	12 hrs
Mustards (mustard greens; mustard spinach; Chinese mustard mizuna)	Aphids; cabbage looper; imported cabbageworm; webworm; diamondback moth	1.5 pints	1.0	3	5	7	12 hrs
Nectarines	Spider mites; plum curculio	1-2 pints	3.0	3	7	7	24 hrs
	Aphids*; Japanese beetles*	4-4.8 pints					

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<ul style="list-style-type: none">• Application rates are based on a standard dilution rate of 300 (ground) gallons of water/A.• Cheminova Malathion 57% may cause fruit spotting on nectarines.* May be mixed with spray oil for dormant and delayed dormant applications. Follow spray oil manufacturer's directions.							
Oats	Cereal leaf beetle; English grain aphids; young grasshoppers; greenbugs	1.5 pints	1.0	2	7	7	12 hrs
Okra	Aphids Japanese beetle	1.5 pints 1.9 pints	1.2	5	7	1	12 hrs
Onion (bulb and green)	Onion maggots	1.5-2.5 pints	1.56	2	7	3	12 hrs
	Onion thrips	1.5-2 pints					
Papaya	Aphids; mealybugs	1.5-2 pints	1.25	8	3	1	12 hrs
Parsley	Aphids; cabbage looper; imported cabbageworm; diamondback moth; webworm; carrot weevil; flea beetle	1.5-2.4 pints	1.5	2	7	7	24 hrs
Parsnip	Aphids; cabbage looper; imported cabbageworm; diamondback moth; webworm; carrot weevil; flea beetle	1.5-2 pints	1.25	3	7	7	24 hrs
Passion Fruit	Drosophila	1.5 pints	1.0	8	7	3	12 hrs
<ul style="list-style-type: none">• Apply with 1 lb. partially hydrolyzed yeast protein or enzymatic yeast hydrolyzate.							
Peaches	Black cherry aphid; black peach aphid; European red mite; green peach aphid; rusty plum aphid; Japanese beetle; spider mite	2.4 pints	3.0	3	11	7	24 hrs
	Oriental fruit moth; plum curculio; cottony peach scale; European fruit lecanium; terrapin scale	4.8 pints					
<ul style="list-style-type: none">• Application rates are based on a standard dilution rate of 300 (ground) gallons of water/A.• Do not apply more than 9 pounds of actual Cheminova Malathion 57% per acre to peach trees.							
Pears	Aphids	1 pint	1.25	2	7	1	12 hrs
	Mealybugs; mites; pear psylla	1-2 pints					
	Codling moth; fruittree leafroller; plum curculio; red-banded leafroller	2 pints					
<ul style="list-style-type: none">• Application rates are based on a standard dilution rate of 300 (ground) gallons of water/A.• Injury may occur under certain conditions on Bosc pears.							

(continued)

(continued)

Crop	Pests Controlled	Rate/Acre	Max. Single App. Rate (lb ai/A)	Max. # of App. per year	Min. App. Interval (days)	Min. Pre-Harvest Interval (days)	Restricted Entry Interval (days)
Peas (dried, green)	Pea weevils; aphids	1.5 pints	1.0	2	7	3	12 hrs
Pecans	Pecan bud moth; aphids; pecan leaf casebearer ² ; spider mites; mites; Pecan phylloxera ¹ ; Pecan nut casebearer ² ; Walnut husk fly ²	1.5-2 pints	2.5	2	7	7	24 hrs
<ul style="list-style-type: none">• Application rates are based on a standard dilution rate of 500 (ground) gallons of water/A for mature trees 25-35 feet high.¹ Apply when buds begin to develop.² Apply when first generation eggs begin to hatch.							
Peppers	Aphids	1-2.5 pints	1.56	2	5	3	12 hrs
	Pepper maggots	2.5 pints					
Pineapple	Mealybugs	3.2 pints	2.0	3	7	7	24 hrs
Potatoes	Aphids; grasshoppers; leafhoppers	2 pints					
	False chinch bug	1.5 pints	1.56	2	7	0	12 hrs
	Mealybugs	2-2.5 pints					
Pumpkins	Aphids	1.5 pints	1.0	2	7	1	12 hrs
Radish	Aphids	1.5 pints	1.0	3	7	7	12 hrs
Rutabagas	Aphids	1.5 pints	1.0	3	7	7	12 hrs
Rice (wild)	Rice stink bug; rice leaf miner	2 pints	1.25	2	7	7	12 hrs
							12 hrs
<ul style="list-style-type: none">• Treat for leafminers shortly after first rice blades appear on surface of the water.• For leafminers, apply when the eggs and larvae are abundant on the seedling rice.• Apply during early milk and dough stage using a minimum of 2 (aerial) gallons of water/A.• Do not apply Propanil within 15 days of malathion treatment. <p>NOTE FOR AQUATIC USES (rice): 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.</p>							
Rye	Cereal leaf beetle	1-1.5 pints	1.0	3	7	7	12 hrs
	English grain aphids; young grasshoppers; greenbugs	1.5 pints					
Salsify	Aphids; imported cabbage worm; cabbage looper; carrot weevil; flea beetles; leafhoppers; spider mites; thrips	1-2 pints	1.25	3	7	7	24 hrs
Shallot	Aphids; thrips	2.5 pints	1.56	2	7	3	24 hrs

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Crop	Pests Controlled	Rate/Acre	Max. Single App. Rate (lb ai/A)	Max. # of App. per year	Min. App. Interval (days)	Min. Pre-Harvest Interval (days)	Restricted Entry Interval (days)
Sorghum	Greenbugs	1.5 pints	1.0	2	7	7	12 hrs
Spinach	Aphids	1.5 pints	1.0	2	7	7	12 hrs
Squash, summer	Aphids; cucumber beetle; leaf miners; pickleworms; spider mites; cut worms; darkling ground beetle; leafhoppers; squash vine borer; thrips	2.8 pints	1.75	3	7	1	24 hrs
Squash, winter	Aphids	1.5 pints	1.0	3	7	1	12 hrs
Strawberry	Aphids; spider mites; Field crickets; lygus bugs; spittle bugs; thrips; potato leafhopper; strawberry leafroller; strawberry root weevil; white flies; thrips	1.5-3.2 pints	2.0	4	7	3	12 hrs
Sweet Potatoes	Leafhoppers; Morningglory leaf miner	1.5-2.5 pints	1.56	2	7	0	12 hrs
Swiss chard	Aphids	1.5 pints	1.0	2	7	14	12 hrs
Tomatoes, Tomatillos	Aphids; spider mites Drosophila	1.5 pints 2.5 pints	1.56	4	5	1	12 hrs
<ul style="list-style-type: none">• Do not apply within 1 day of harvest.• Apply a full coverage application to fruit and foliage.							
Trefoil (birdsfoot)	Alfalfa weevil larvae; aphids; grasshoppers; lygus bugs; potato leaf hoppers; spider mites; spittlebugs; stink bugs; pea aphid Armyworms Clover leaf weevil Vetch bruchid	1-2 pints 2 pints 1.5 pints 2 pints	1.25	2 per cutting	14	0	12 hrs
Turnips	Aphids; cabbage loopers; imported cabbageworm; carrot weevil	1-2 pints	1.25	3	5 days for turnip greens 7 days for turnip root	1	12 hrs
Vetch	Alfalfa weevil larvae; aphids; armyworms; clover leaf weevil; grasshoppers; lygus bugs; pea aphid; potato leafhoppers; spider mites; spittlebugs; vetch bruchid; omnivorous leaf tier; pea aphid; vetch bruchid	1-2 pints	1.25	2 per cutting	14	0	12 hrs

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Crop	Pests Controlled	Rate/Acre	Max. Single App. Rate (lb ai/A)	Max. # of App. per year	Min. App. Interval (days)	Min. Pre-Harvest Interval (days)	Restricted Entry Interval (days)
Walnuts	Aphids; European red mites; walnut aphid; walnut husk fly	4 pints	2.5	3	7	7	24 hrs
• Applications may be made using conventional ground sprayer or air-carrier type sprayer (500 gallons of water/A).							
Watercress	Aphids	1.6-2 pints	1.25 or 1.0	5	3	3	24 hrs or 12 hrs
Watermelons	Aphids	1.5 pints	1.0	2	7	1	12 hrs
Wheat (Spring and Winter)	Cereal leaf beetle	1-1.5 pints					
	English grain aphids; young grasshoppers; greenbugs	1.5 pints	1.0	2	7	7	12 hrs
Yams	Leafhoppers	1.5-2.5 pints	1.56	2	7	0	24 hrs

NON-AGRICULTURAL USE SITES

Site	FL. OZ./Acre	Max. Single App. Rate	Use Pattern Limitations	Restricted Entry Interval (days)
Christmas tree plantations	82	3.2 lb ai/A	Maximum of 2 applications per year	12 hrs
Fence rows/hedge rows	6	0.0054 lb ai/1000 ft ²		
Ornamental and/or shade trees	64	2.5 lbs ai/100 gal	Maximum of 2 applications per year; 10 day minimum re-treatment interval	12 hrs
Ornamental herbaceous plants	64	2.5 lbs ai/100 gal		12 hrs
Ornamental non-flowering plants	64	2.5 lbs ai/100 gal		
Ornamental woody shrubs and vines	64	2.5 lbs ai/100 gal	Maximum of 2 applications per year/growing cycle; 10 day minimum re-treatment interval	12 hrs
Pine seed orchards	82	3.2 lbs ai/A	Maximum of 2 applications per year/growing season; 7 day minimum re-treatment interval	12 hrs

FLY CONTROL

Fly control: For use on the lower outside foundation of the home and fence/hedge rows.

PEST CONTROLLED	RATE	DIRECTIONS FOR USE
Adult flies	Straight sprays: 5 tablespoons + 1 gallon water or 1 cup + 2 ½ gallon water or 1 quart + 12 gallon water	Apply as a spray at the rate of 1 gallon per 1,000 sq. ft. on painted surfaces and 2 gallons per 1,000 sq. ft. on unpainted surfaces where flies alight or congregate
Adult flies Fly maggots	Bait sprays: 5 tablespoons + (7 tablespoons sugar or molasses (unsulfurized) or corn syrup) + 2 ½ gallon water or 1 cup + (1 cup sugar or molasses (unsulfurized) or corn syrup) + 2 ½ gallon water or 1 quart + (2 ½ lbs. sugar or 1 quart molasses (unsulfurized) or 1 quart corn syrup) + 12 gallon water	Apply as a bait spray. Do not apply to freshly whitewashed surfaces. Wait 14 days after whitewashing before applying.
Repeat applications as necessary. Avoid applying oil-based formulations to valuable ornamental plants as injury may occur.		

WARRANTY DISCLAIMER

Cheminova warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CHEMINOVA MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Cheminova or the seller. All such risks shall be assumed by Buyer.

LIMITATION OF REMEDIES

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Cheminova's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

To the extent consistent with applicable law, Cheminova shall not be liable for consequential, incidental, or special damages or losses in any matter.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Cheminova or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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CHEMINOVA MALATHION 57% ORGANOPHOSPHATE

ACTIVE INGREDIENTS:

Malathion* 57.00%

INERT INGREDIENTS: 43.00%

TOTAL: 100.00%

*O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate

** Contains Petroleum Distillate

(1 gallon contains 5.0 pounds of malathion)

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 the label, find someone to explain it to you in detail.)

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT 1-866-303-6950

Read the entire label before using this product. Use only according to label instructions.

Read the WARRANTY DISCLAIMER, INHERENT RISKS OF USE,
and LIMITATION OF REMEDIES before buying or using.

If terms are not acceptable, return product unopened without delay.

SEE LABEL BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

Causes substantial but temporary eye injury. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID

This product is an organophosphate and a cholinesterase inhibitor.

IF SWALLOWED: Immediately call a poison control center or doctor. Do not induce vomiting unless told to by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.

NOTE TO PHYSICIAN: Malathion is a cholinesterase inhibitor affecting the central and peripheral nervous systems and producing cardiac and respiratory depression. Antidote: Administer atropine sulphate in large doses, TWO to FOUR mg intravenously or intramuscularly as soon as cyanosis is overcome. Repeat at 5 to 10 minute intervals until signs of atropinization appear. 2-PAM chloride is a pharmacological antidote and may be administered as an adjunct to, but not a substitute for, atropine, which is a symptomatic and often lifesaving antidote. **DO NOT GIVE MORPHINE OR TRANQUILIZERS.** At first sign of pulmonary edema, the patient should be given supplemental oxygen and treated symptomatically. Continued absorption of malathion may occur and relapse may occur after initial improvement. **VERY CLOSE SUPERVISION OF THE PATIENT IS INDICATED FOR AT LEAST 48 HOURS.** Contains Petroleum Distillate. May pose an aspiration pneumonia hazard.

EPA Reg. No. 67760-40

EPA Est. No. 39578-TX-1

NET CONTENTS: 2.5 Gallons

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile rubber, or viton. If you want more options, follow the instructions for category F on an EPA chemical-resistance category selection chart. **For all formulations and use patterns – mixers, loaders, applicators, flaggers, and other handlers must wear:**

- long sleeved shirt and long pants;
 - shoes and socks;
 - chemical resistant gloves (pilots must wear chemical resistant gloves only when entering or exiting the aircraft)
- For all dip applications – mixers, loaders, and applicators must wear:**
- long sleeved shirt and long pants;
 - shoes and socks;
 - chemical resistant gloves;
 - chemical resistant apron
- For all air blast applications – applicators must wear:**
- long sleeved shirt and long pants;
 - shoes and socks;
 - chemical resistant gloves (pilots must wear chemical resistant gloves only when entering or exiting the aircraft);
 - chemical resistant apron

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.

ENGINEERING CONTROL STATEMENTS

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

ENVIRONMENTAL HAZARDS

This product 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 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 product 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 rinseate. 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.

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.

PHYSICAL OR CHEMICAL HAZARDS

Flammable. Do not use or store near heat or open flame, including pilot lights.

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.

STORAGE AND DISPOSAL

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

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).

PESTICIDE STORAGE: Cheminova Malathion 57% 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 65°C (131°F), and should not be stored for long periods of time at a temperature in excess of 25°C (77°F).

CONTAINER DISPOSAL:

Nonrefillable containers equal to or less than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinseate into application equipment or a mix tank or store rinseate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Nonrefillable containers greater than 5 gallons:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into the application equipment or a mix tank. Fill the container ¼ 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 rinseate into application equipment or a mix tank and store rinseate for later use or disposal. Repeat this procedure two more times.

Manufactured for:
Cheminova, Inc.
P.O. Box 110566
Research Triangle Park, NC 27709

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HELPING YOU GROW