

RESTRICTED USE PESTICIDE

DUE TO ACUTE HUMAN TOXICITY AND VERY HIGH TOXICITY TO AQUATIC ORGANISMS

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Direct supervision for this product requires the certified applicator to review federal and supplemental label instructions with all personnel prior to application, mixing, loading, or repair or cleaning of application equipment.

GROUP 12B ACARICIDE



Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD **2015-2017** LIC. NO. **8026.75**



Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD **2012-2014** LIC. NO.

MerazTM

MITICIDE

Water Soluble Pack

ACTIVE INGREDIENT	By Weight
Fenbutatin-oxide[Hexakis (2-methyl-2-phenylpropyl)distannoxane]	50%
OTHER INGREDIENTS	50%
TOTAL	100%

EPA Reg. No. 70506-211

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



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

FIRST AID

If Swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person. 	
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 Inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further 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 five minutes, then continue rinsing. • Call a poison control center or doctor for further treatment advice. 	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Contact the Rocky Mountain Poison Center at 1-866-673-6671 for emergency medical treatment information.</p>		
<p>NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsion may be needed.</p>		

See Inside for additional Precautionary Statements, and Directions For Use.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.



Manufactured for: **United Phosphorus, Inc.**
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406 • 1-800-438-6071

Net Contents: _____ **Pounds**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER! Fatal if inhaled. Corrosive. Causes irreversible eye damage. Causes skin irritation. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing. Do not breathe dust or spray mist. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse. Avoid handling the inner bag as moisture will cause breakage.

Do not graze or feed animals on cover crops grown in treated areas. Avoid contamination of food, feedstuffs, and domestic water supplies.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Coveralls over short sleeve shirt and short pants
- Socks and chemical-resistant shoes
- Chemical-resistant gloves (category A)
- Protective eyewear (goggles, face shield, or safety glasses)
- Chemical-resistant headgear
- NIOSH approved respirator with any R, P or HE filter.
- For cleaning equipment, add a chemical-resistant apron.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENTS

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

Water soluble packets when used correctly qualify as a closed loading system under the WPS. Handlers handling this product while it is enclosed in intact water-soluble packets are permitted to wear long-sleeved shirt, long pants, shoes plus socks, chemical-resistant gloves, and chemical-resistant apron, provided the other required PPE is immediately available in case the bag is opened.

USER SAFETY RECOMMENDATIONS

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

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to birds, mammals, fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift from runoff from treated areas maybe hazardous to aquatic organisms in neighboring areas.

Do not contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) 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 the restricted-entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves (category A)
- Shoes plus socks
- Protective eyewear (goggles, face shield, or safety glasses)

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within a scope of the Worker Protection Standard for agricultural pesticides 40 CFR part 170. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

Do not apply this product through any type of irrigation system. Not for use in residential orchard settings.

INFORMATION

Meraz miticide is a wettable powder contained in a water soluble packet that is used to control a wide range of herbivorous mites, including strains that are resistant to other miticides. Meraz miticide should be dispersed in water and applied using conventional dilute sprayers or concentrate sprayers. Agitation is required during mixing and spraying.

PACKAGING

Meraz miticide is premeasured in 1 pound Soluble Packets, which readily dissolve in water. Each Soluble Packet is contained in an individual waterproof, foil bag, with 12 bags enclosed in a cardboard box. DO NOT attempt to open the Soluble Packets.

Take the following precautions when handling Meraz miticide Soluble Packets:

- Do not handle the Soluble Packets excessively.
- Do not handle the Soluble Packets with wet hands.
- Do not expose the Soluble Packets to water or moisture, as this will cause breakage.
- Do not place the Soluble Packets on wet surfaces.
- Do not place the foil bag in the spray tank. It is NOT soluble in water.
- Do not sell individual water Soluble Packets.

APPLICATION RECOMMENDATIONS

To achieve the best results, apply Meraz miticide when mites first appear or when populations reach an average of 1-2 mites per lens field. Thorough and complete coverage of infested foliage is necessary for optimum control. Meraz miticide performs best when the daily temperature at application averages above 70° F. When the daily temperature at application averages below 70° F, performance is reduced. Meraz miticide may be applied when honeybees and beneficial mites are present.

For best results and to improve thorough coverage, use ground or airblast application equipment to make applications of Meraz miticide.

Apply this product only as recommended on this label.

DETERMINING GALLONAGE

To apply the correct amount of Meraz miticide to your orchard, determine the number of gallons of water needed to spray 1 acre of your trees to the point of drip. If you have not already determined this gallonage, conduct a test to determine it. If you need assistance in calculating the proper gallonage, contact your equipment dealer or State Extension specialist.

SPRAY PREPARATION

CAREFULLY OPEN ENVELOPE AND IMMEDIATELY DROP THE INNER BAG INTO THE SPRAY TANK. DO NOT OPEN OR HANDLE THE INNER BAG. MOISTURE WILL CAUSE BREAKAGE.

Before mixing Meraz miticide, thoroughly clean the spray tank if the spray tank has been used previously to mix boron containing or free chlorine releasing pesticide products. Even minimal carryover concentration of boron or chlorine containing products in the spray tank may cause the dissolved water soluble bag material to precipitate in the spray tank. Do not put water soluble bags close to the recirculating inlet and outlet, as they might block the line before completely dissolved.

To prepare an application of Meraz miticide, follow these directions:

1. Fill a clean spray tank 1/4 to 1/2 full with water and agitate.
2. Add the required number of Meraz miticide Soluble Packets (see Specific Uses for specific rate recommendations).

NOTE: To add Meraz miticide packets, open the foil bag and drop the packet directly into water. DO NOT place the foil bag in the spray tank, as it is insoluble.

3. Allow the packets to dissolve completely. This should take about 5 minutes. Continue agitating the mixture to ensure that the Meraz miticide is thoroughly mixed with the water.
4. Add the remaining water.

Tank Mixing

This product can be tank mixed with other pesticides provided that label directions are followed for the most restrictive of label precautions and limitations. Tank mixtures are permitted only in those states where the tank mix partner is registered.

When tank mixing Meraz miticide with other products, introduce the products into the tank in the following order:

(1) water soluble packets (such as Meraz miticide), (2) water dispersible granules, (3) wettable powders, (4) water based suspension concentrates, (5) water soluble concentrates, (6) oil based suspension concentrates, (7) emulsifiable concentrates, (8) adjuvants, surfactants and oils, (9) soluble fertilizers, and (10) drift retardants. Always allow each product to fully disperse before adding the next product.

Products containing boron will interfere with film solubility of the water soluble packets. If boron products are added to the spray tank, add the Meraz miticide soluble packets first, making sure they are completely dissolved before adding any boron products.

Compatibility

Since formulations may be changed and new ones introduced, it is recommended that users check the desired tank mix and observe for possible adverse changes (settling out, flocculation, etc.) before use. Avoid mixtures of several materials and very concentrated spray mixtures.

RESISTANCE MANAGEMENT

For resistance management, Meraz miticide is a group 12B acaricide. Repeated exclusive use of Meraz miticide, or other group 12B acaricides, may lead to the buildup of resistant strains of mites in some crops. If more than one application of an acaricide is needed to control heavy and prolonged populations of mites, consider applying a product with a different mode of action.

Some mites are known to develop resistance to products used repeatedly for control. Because development of resistance cannot be predicted, this product may be used as part of resistance management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode of action classes of miticides on succeeding generations and targeting the most susceptible life stage. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of mite may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternate method of control in your area. For additional information on mite and insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org>.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (>150 to 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See **Wind**, **Temperature and Humidity**, and **Temperature Inversions** sections of this label.

Controlling Droplet Size - General Techniques

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using lowdrift nozzles.

Controlling Droplet Size - Aircraft

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** - The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.
- **Application Height** - Application more than 10 feet above the canopy increases the potential for spray drift.

BOOM HEIGHT

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

WIND

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

AIR ASSISTED (AIR BLAST) FIELD SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

NOTE: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

AIR ASSISTED (AIR BLAST) TREE SPRAYERS

Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream.

In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage.
- Do not allow spray to go beyond the edge of the cultivated area. Spray the outside row only from outside the planting.

ORNAMENTAL USES

CROP	MITES CONTROLLED	OUNCES PER 100 GALLONS DILUTE SPRAY	WATER SOLUBLE BAGS PER 400 GALLONS DILUTE SPRAY
Greenhouse and Outdoor Ornamentals (including nursery stock, flowers and plants grown for propagation purposes)	Spruce Spider, Oligonychus (Oak Mite, Southern Red Mite), Two-spotted Spider	8-16	2-4
	<ul style="list-style-type: none"> • Do not add oil to the spray solution. • Apply when mites first appear. Repeat as necessary to maintain control. Frequent repeat applications may cause the appearance of visible spray residues on foliage. • Apply to the foliage only of chrysanthemums (pre-bloom) and poinsettias (prebract). • Under greenhouse conditions, foliage and flowers of certain species may demonstrate sensitivity to repeat applications. If in doubt, make a test application prior to general spraying. Occasional minor sensitivity has been observed on certain species.¹ 		
Established Landscape Ornamentals (Commercial application to established landscape ornamentals, including trees, shrubs, flowering ornamentals, bedding plants, annuals and perennials.)	Two-spotted Spider, Clover	8-16	2-4
	<ul style="list-style-type: none"> • Do not add oil to spray solution. • Apply when mites first appear. Repeat as necessary to maintain control. Do not apply more than 4 times per year. • Under extreme weather conditions, foliage and flowers of certain species may demonstrate sensitivity to repeat applications. If in doubt, make test applications prior to general spraying. Occasional minor sensitivity has been observed on certain species.¹ 		
<p>¹ <i>Salix melanostachys</i> (common willow), <i>Asplenium bulbiferum</i> (spleenwort garden fern), <i>Dryopteris erythrosora</i> (wood fern), <i>Cercis canadensis</i> (common redbud), <i>Camellia japonica</i> (red garden camellia), <i>Pellaea rotundifolia</i> (button fern), <i>Davallia fejeensis</i> (rabbit foot fern), <i>Asparagus meyeri</i> (Meyers asparagus fern), <i>Asplenium nidus</i> (birdnest fern), <i>Adiantum cuneatum</i> (maidenhair fern), <i>Celosia argentea</i> (cockscomb), <i>Verbena hortensis</i> (verbena), <i>Ageratum houstonianum</i> (floss flower), <i>Rosa sp.</i> (common rose - some varieties, esp. yellow).</p>			

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a secure, dry and temperate area. Keep container closed when not in use. Do not store near food or feed. Do not use or store around the home. Avoid contact with water. In case of spill or leak, soak up with sand, earth or synthetic absorbent and dispose of wastes in compliance with local, State and Federal regulations.

PRODUCT DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken.

IMPORTANT INFORMATION READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

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