

15676-M3a  
10/16/00



# MIMIC® 2LV

## AGRICULTURAL INSECTICIDE

### ACTIVE INGREDIENT

#### Tebufenozide

Benzoic acid, 3,5-dimethyl-, 1-(1,1-dimethylethyl)-2-(4-ethylbenzoyl)

hydrazide.....24.0%\*

INERT INGREDIENTS.....76.0%

**TOTAL** 100.00%

\*Equivalent to 2 lbs. active ingredient per gallon

EPA REG NO. 707-270

EPA EST. NO. 39578-TX-01

**NOTICE:** Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions. If the Conditions of Sale and Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.

## KEEP OUT OF REACH OF CHILDREN

## CAUTION

### FIRST AID

<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have the person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>

### HOT LINE NUMBER

Have the product container with you when calling a poison control center or doctor, or going for treatment. You may also contact Rohm and Haas Company at 215-592-3000, day or night, for emergency medical treatment information.

**ACCEPTED**

NOV 15 2000

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 707-270

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

Causes moderate eye irritation. Harmful if inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist.

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

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

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

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

**User Safety Recommendations**

**Users should:**

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

**ENVIRONMENTAL HAZARDS**

This product is toxic to aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Under some conditions, this chemical may also have a high potential for runoff into surface water for several weeks or months after application. Do not cultivate within 10 feet of aquatic areas so as to allow growth of a vegetative filter strip. Drift from applications of this pesticide is likely to result in damage to sensitive aquatic invertebrates in water bodies adjacent to treatment area.

For terrestrial uses, do not apply directly to water or to areas where surface water is present or to inter-tidal areas below the mean high water mark, except under forest canopy when aerially applied to control forest pests. Do not contaminate water when disposing of equipment wash-waters and rinsate. Do not apply when weather conditions favor drift or runoff from areas treated.

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

**DIRECTIONS FOR USE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

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

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers 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 **4 hours**.

PPE required for early entry into 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
- Water-proof gloves
- Shoes plus socks

## STORAGE AND DISPOSAL

**STORAGE:** Store in a cool dry well-ventilated area, but not below 32°F.

**PESTICIDE DISPOSAL:** Do not contaminate water, food or feed by storage or disposal. Pesticide wastes are toxic. 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 the Hazardous Waste representative at the nearest EPA regional office for guidance.

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

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:** Appropriate protective equipment must be worn when handling a spill of this material. Transfer spilled material to suitable containers for recovery or disposal. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Refer to **Precautionary Statements.**

## CONDITIONS OF SALE AND WARRANTY

Rohm and Haas warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. **ROHM AND HAAS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.** Handling, storage and use of the product by Buyer or User are beyond the control of Rohm and Haas and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. **IN NO CASE WILL ROHM AND HAAS OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.**

## GENERAL INFORMATION

MIMIC® 2LV Agricultural Insecticide mimics the action of the natural insect hormone 20-hydroxyecdysone, the physiological inducer of the molting and metamorphosis process in insects. MIMIC 2LV is highly active against most lepidopterous larvae while having practically no activity at typical use-rates against other orders of insects. The selectivity of MIMIC 2LV allows for the maintenance of the populations of beneficial and predatory insects which is a key element in integrated pest management programs. MIMIC 2LV controls lepidopterous larvae through a novel mode-of-action by the induction of a premature lethal molt which initiates within hours of ingestion of treated crop surfaces. Contact activity has also been observed in some insects. Actual death of the larvae will take several days to occur although feeding by the insects generally ceases within 24 hours of ingestion.

## USE RATE DETERMINATION

Carefully read, understand and follow label use rates, recommendations and restrictions. Apply the amount specified in the following table with properly calibrated aerial or ground spray equipment.

The low rates may be used for light infestations of the target lepidopterous species and the higher rates for moderate to heavy infestations. MIMIC 2LV may be applied in either dilute or concentrate sprays so long as the application equipment is calibrated and adjusted to deliver thorough, uniform coverage. Use the specified amount of MIMIC 2LV per acre regardless of spray volume used. Prepare only the amount of spray solution required to treat the measured acreage.

## MIXING AND COMPATIBILITY

Fill the spray tank one-third to one-half full of clean water and slowly pour MIMIC 2LV Agricultural Insecticide into the spray tank. Maintain agitation in the spray tank during mixing, loading and application. Triple-rinse empty container and add rinsate to spray tank.

MIMIC 2LV Agricultural Insecticide is believed to be compatible with most commonly used agricultural fungicides, insecticides, growth regulators, foliar fertilizers and spray adjuvants. If in doubt, mix proportional amounts of all spray

ingredients in a test vessel. Shake the mixture vigorously and allow it to stand for fifteen minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied.

**APPLICATION TIMING**

The activity of MIMIC 2LV Agricultural Insecticide is expressed primarily through ingestion by the target larvae. Consequently, the timing of application is dependent on the feeding behavior of the target pest. For internal feeding larvae, application must be made prior to the time that surface feeding occurs. For foliar or surface feeding larvae, application made while active feeding is occurring will be effective.

Re-application may be required to protect new flushes of foliage or rapidly expanding fruit. The re-application interval will vary depending on how rapidly the crop is growing and the generation time of the target pest. While MIMIC 2LV Agricultural Insecticide is essentially equally effective against all instars, it is generally good practice to make applications to early instars to avoid the heavy damage that can be inflicted by later instar larvae.

For best results, begin applications when first signs of feeding damage or when threshold levels of moths, eggs or larvae occur. Consult the Cooperative Extension Service, or other qualified professional authorities to determine the appropriate threshold for application in your area.

**APPLICATION INSTRUCTIONS**

Because MIMIC 2LV Agricultural Insecticide must be ingested by the larvae, application must be in a manner that assures uniform and thorough coverage. Higher water volume and increased spray pressure generally provide better coverage. Operating an air-blast sprayer at ground speeds greater than 2 mph and making applications in an alternate row middle pattern in tree crops and vines may result in less than satisfactory coverage and poor performance, particularly in conditions of high pest infestation levels, extremely large trees and/or dense foliage. Avoid application under conditions when uniform coverage cannot be assured or when excessive spray drift may occur. A minimum of six hours drying time is required between the completion of application and the onset of precipitation to ensure optimum performance.

**CHEMIGATION**

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

**SPRAY ADJUVANTS**

The addition of agricultural adjuvants is not required to maximize the performance, coverage or weatherability of MIMIC 2LV. The addition of spray adjuvants is not recommended.

**RESISTANCE MANAGEMENT**

Any insect population may contain individuals that are naturally resistant to a specific pesticide, therefore, the use of any one insecticide against many consecutive generations of a pest can result in the development of resistance problems. To prevent or delay the development of resistance, Rohm and Haas Company recommends rotation of MIMIC 2LV with insecticides of alternate modes of action and the utilization of Integrated Pest Management practices such as routine monitoring, the use of treatment thresholds to time applications and cultural and biological controls wherever possible. We further recommend that MIMIC 2LV not be used on more than three consecutive generations of a pest. Since the development of resistance cannot be predicted we suggest that you consult local or State Extension personnel or your local Rohm and Haas Company representative for resistance management guidance appropriate to your crop, locality and production practices.

**USE DIRECTIONS FOR FORESTS\*, TREES\*\* AND SHRUBS\*\*\***

Because MIMIC 2LV Agricultural Insecticide must be ingested in order to be effective, it is essential that coverage is thorough and uniform. Higher carrier volumes and higher use rates are recommended for very large trees or dense stands and for heavy target pest infestations.

**GROUND APPLICATION:** Hydraulic ground sprayers should be calibrated to deliver a minimum of 50 gallons per acre. For mist blowers or air blast sprayers, use a minimum of 10 gallons per acre.

**AERIAL APPLICATION:** Make applications of MIMIC 2LV Insecticide in a minimum of one gallon per acre. For pests that feed in the top of the canopy such as gypsy moths, use a minimum of 1/2 gallons per acre. Higher carrier volumes are recommended when environmental conditions are less than ideal for aerial applications.

TARGET PESTS	APPLICATION RATE FLUID OUNCE PER ACRE (lbs. AI/Acre)	RECOMMENDATIONS	RESTRICTIONS
Bagworm <i>(Thyridopteryx ephemeraeformis)</i> Browntail Moth <i>(Euproctis chrysorrhoea)</i> Elm spanworm <i>(Ennomos subsignaria)</i> Fall Cankerworm <i>(Alsophila pometaria)</i> Fall webworm <i>(Hyphantria cunea)</i> Gypsy moth <i>(Lymantria dispar)</i> Hemlock looper <i>(Chambdina fiscellaria)</i> Jack pine budworm <i>(Choristoneura pinus)</i> Puss caterpillar <i>(Megalopyge opercularis)</i> Tent caterpillar Forest, Eastern, Western <i>(Malacosoma disstria)</i> <i>Malacosoma americanum</i> <i>Malacosoma californicum)</i> Zimmerman pine moth <i>(Dioryctria zimmermani)</i>	4.0 to 8.0 (0.06 to 0.12 lb. AI/Acre)	Apply to early instar (1 <sup>st</sup> , 2 <sup>nd</sup> , or 3 <sup>rd</sup> ) larvae. In general, foliage development should be a minimum of 20%.	Do not apply more than 16 Fluid Ounces per year.  Uniform coverage of the foliage is essential to provide maximum protection from defoliation and reduction of egg mass deposition.
Pine tip moth <i>(Rhyacionia frustrana,</i> <i>R. neomexicana,</i> <i>R. buoliana,</i> <i>R. rigidana,</i> <i>R. subtropica)</i>	8.0 (0.12 lb. AI/Acre)	Apply to early instar (1 <sup>st</sup> to 2 <sup>nd</sup> ) larvae after each new foliage flush, in general, at approximately 25% shoot expansion.	
Spruce budworm <i>(Choristoneura fumiferana</i> <i>and C. occidentalis)</i> Tussock moth <i>(Dasychira pinicola,</i> <i>Lophocampa maculata,</i> <i>Orgyia pseudotsugata,</i> <i>O. vetusta)</i>	4.0 to 8.0 (0.06 to 0.12 lb. AI/Acre)	Make applications to 4 <sup>th</sup> to 5 <sup>th</sup> instar larvae that are actively feeding on foliage or are feeding outside the candle caps.	

- \* Forests include commercial, private and public forest land, conifer release sites, shelterbelts and windbreaks, and forest plantings.
- \*\* Trees include Christmas Trees, nurseries and plantations, conifer seed orchards, ornamental and shade trees.
- \*\*\* Shrubs include woody shrubs and vines.

**USE DIRECTIONS FOR CANOLA**

**ROTATIONAL CROP RESTRICTIONS**

The following rotational crops may be planted at intervals defined below following the final application of MIMIC 2LV Agricultural Insecticide at the recommended rates for a registered use.

CROP	RE-CROPPING INTERVAL
Crops for which tebufenozide use is registered	No restrictions
All other crops	30 days

Note: When using MIMIC 2LV with other registered pesticides, always refer to rotational restrictions and precautions on the other product's label and comply with the most restrictive rotational guidelines.

**GROUND APPLICATION:** Apply a minimum of 8 gallons per acre by conventional ground equipment to young crop and small plants. Apply a minimum of 10 gallons per acre to densely foliated or difficult-to-cover crop to insure thorough coverage.

**AERIAL APPLICATION:** Make applications of MIMIC 2LV Insecticide in a minimum of five gallons per acre.

TARGET PEST	APPLICATION RATE Fluid Ounces Per Acre	APPLICATION TIMING	RESTRICTIONS
Beet armyworm ( <i>Spodoptera exigua</i> ) Bertha armyworm ( <i>Mamestra configurata</i> )	8.0 (0.12 lb. AI/Acre)	For early-season applications only to young crop and small plants. Begin application when first signs of feeding damage appear or when infestations reach threshold levels as defined by Cooperative Extension Service or other qualified professional authorities.	Do not apply more than 16 fluid ounces per application and do not exceed 64 fluid ounces per season.  Allow at least 14 days to elapse between final application and harvest.
	8.0 to 16.0 (0.12 to 0.25 lb. AI/Acre)	For mid- to late- season applications and to heavier infestations and under conditions in which thorough coverage is more difficult. Under heavy infestations, continuous moth flights and/or egg masses and larvae in all stages of development, re-application on a 10- to 14-day schedule will be required to protect new growth until moth flights and/or hits subside.	See "ROTATIONAL CROP RESTRICTIONS" in the body of this label.

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