

MATERIAL SAFETY DATA SHEET

MUSTANG™ INSECTICIDE



MSDS Ref. No: 52315-07-8-13

Version: Global

Date Approved: 10/09/2001

Revision No: 7

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200; the EC directive, 91/155/EEC and other regulatory requirements. The information contained herein is for the concentrate as packaged, unless otherwise noted.

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MUSTANG™ INSECTICIDE**PRODUCT CODE:** 1495**ACTIVE INGREDIENT:** Zeta-cypermethrin**CHEMICAL FAMILY:** Pyrethroid Pesticide**MOLECULAR FORMULA:** C₂₂H₁₉Cl₂NO₃ (zeta-cypermethrin)**SYNONYMS:** FMC 56701; (S)-cyano (3-phenoxyphenyl)methyl (+/-)cis/trans 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: (S)-a-cyano-3-phenoxybenzyl-(1R)cis-trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate or (S)-a-cyano-3-phenoxybenzyl (1RS,3RS,1SR, 3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate**ALTERNATE TRADENAME(S):** Mustang 1.5 EW

MANUFACTURER

FMC CORPORATION
Agricultural Products Group
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Philadelphia, PA 19103 USA

Emergency Telephone Numbers:

Emergency Phone (FMC) 800-331-3148
(U.S.A. & Canada)

Emergency Phone (FMC) 716-735-3765
(Reverse charges)

CHEMTREC (U.S.): (800) 424-9300
(U.S.A. & Canada)

(202) 483-7616 (All other countries)

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS#</u>	<u>Wt.%</u>	<u>PEL/TLV</u>	<u>EC No.</u>	<u>EC Class</u>
Zeta-cypermethrin	52315-07-8	17.1	None	None	None
Surfactant Blend	0000-00-0	<7.5	None	None	None
Propylene Glycol	57-55-6	<6	10.0 mg/m ³ WEEL	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- IMMEDIATE CONCERNS:** - White liquid with a faint, sharp and acrid odor.
- Slightly combustible. May support combustion at elevated temperatures.
 - Thermal decomposition and burning may form toxic by-products.
 - For large exposures or fire, wear personal protective equipment.
 - Highly toxic to fish and aquatic organisms. Keep out of drains and water courses.
 - Moderately toxic if swallowed.

POTENTIAL HEALTH EFFECTS: Effects from overexposure result from either swallowing or inhaling this product. Symptoms of overexposure include salivation, tremors, convulsions, decreased activity and incoordination. Contact with this product may produce skin sensations such as numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.

MEDICAL CONDITIONS AGGRAVATED: None presently known.

4. FIRST AID MEASURES

EYES: Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

SKIN: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

INGESTION: Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with a finger or by giving syrup of ipecac. Never induce vomiting or give anything by mouth to an unconscious person. Contact a medical doctor.

INHALATION: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, contact a medical doctor.

NOTES TO MEDICAL DOCTOR: This product has moderate oral, and low

dermal and inhalation toxicity. It is mildly irritating to the eyes, and slightly irritating to the skin. Reversible skin sensations (paresthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Foam, CO₂ or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

FIRE / EXPLOSION HAZARDS: Slightly combustible. This material may support combustion at elevated temperatures.

FIRE FIGHTING PROCEDURES: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, hydrogen cyanide, chlorine and hydrogen chloride.

6. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8, "Exposure Controls/Personal Protection". Keep unprotected persons and animals out of the area.

Keep material out of lakes, streams, ponds and sewer drains. Dike to confine spill and absorb with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label contents for disposal.

To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e., methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust at all process locations where vapor or mist may be emitted. Ventilate all transport vehicles prior to unloading.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For splash, mist or spray exposure, wear chemical protective goggles or a face shield.

RESPIRATORY: For splash, mist or spray exposure wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

PROTECTIVE CLOTHING: Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a PVC suit. Leather items - such as shoes, belts and watchbands - that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

WORK HYGIENIC PRACTICES: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

GLOVES:

Wear chemical protective gloves made of materials such as butyl rubber, nitrile or neoprene. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Faint, sharp and acrid

APPEARANCE: White liquid

pH: 4.4 - 4.5 @ 22°C (5% in water)

SOLUBILITY IN WATER: Emulsifies

SPECIFIC GRAVITY: 1.04 (water = 1)

MOLECULAR WEIGHT: 416.3 (zeta-cypermethrin)

WEIGHT PER VOLUME: 8.66 lb/gal (1040 g/L)

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat and fire.

STABILITY: Stable

POLYMERIZATION: Will not occur

11. TOXICOLOGICAL INFORMATION

DERMAL LD₅₀: >2000 mg/kg (rat)

ORAL LD₅₀: 234 mg/kg (rat)

INHALATION LC₅₀: >0.89 mg/L/4 hr (rat)

ACUTE EFFECTS FROM OVEREXPOSURE: This product has moderate oral, and low dermal and inhalation toxicity. It is mildly irritating to the eyes, and slightly irritating to the skin. Signs of toxicity in laboratory animals included tremors, decreased locomotion, rales, tonic-clonic convulsions, and oral discharge. Experience to date indicates that contact with this product may produce skin sensations such as numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours. In humans, ingestion of large amounts of propylene glycol has resulted in symptoms of reversible central nervous system depression including stupor, rapid breathing and heartbeat, profuse sweating and seizures.

CHRONIC EFFECTS FROM OVEREXPOSURE: No data available for the formulation. In studies with laboratory animals, zeta-cypermethrin did not cause reproductive effects or teratogenicity in laboratory animals. An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosome aberrations. Repeated overexposure to propylene glycol can produce central nervous system depression, hemolysis and minimal kidney damage.

CARCINOGENICITY:

IARC: Not listed

NTP: Not listed

OSHA: Not listed

OTHER: (ACGIH) Not listed

12. ECOLOGICAL INFORMATION

The physical and environmental properties, as well as the environmental toxicology of zeta-cypermethrin, are similar to cypermethrin. Unless otherwise indicated, the data presented below pertains to cypermethrin.

ENVIRONMENTAL DATA: Cypermethrin is rapidly degraded in soil with a half-life of 2 to 4 weeks. It is readily hydrolyzed under basic conditions (pH = 9), but under acidic and neutral conditions, hydrolysis half-life can be 20 to 29 days. Cypermethrin has a high affinity for organic matter and a Log Pow of 5.0; yet because of the ease with which the material undergoes degradation, it has a very low potential for bioconcentration (BCF = 17) and is not mobile in soil.

ECOTOXICOLOGICAL INFORMATION: Zeta-cypermethrin is considered highly toxic to fish and aquatic arthropods and has LC50 values which range from 0.002 µg/L to 2.37 µg/L. These values are comparable to cypermethrin. Care should be taken to avoid contamination of the aquatic environment. Cypermethrin is slightly toxic to birds, and oral LD50 values are greater than 10,248 mg/kg.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.

EMPTY CONTAINER: Non-returnable containers which held this material should be cleaned, prior to disposal, by triple rinsing. Containers which held this material may be cleaned by being triple-rinsed, and recycled, with the rinsate being incinerated. Do not cut or weld metal containers. Vapors that form may create an explosion hazard.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

PROPER SHIPPING NAME: Pyrethroid pesticide, liquid, toxic

TECHNICAL NAME: Zeta-cypermethrin

PRIMARY HAZARD CLASS/DIVISION: 6.1

UN/NA NUMBER: UN3352

PACKING GROUP: III

REPORTABLE QUANTITY (RQ): None

U.S. SURFACE FREIGHT CLASS: Insecticides, NOI, Poison other than Class A
Poison. NMFC Item 102100.

MARINE POLLUTANT #1: zeta-cypermethrin (Severe Marine Pollutant)

NAERG: 151

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR
355):** Not listed

SECTION 311 HAZARD CATEGORIES (40 CFR 370): Immediate, Delayed

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370): The
threshold planning quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs.
This product contains the following ingredients with a TPQ of less than 10,000 lbs.: None

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): There are no
ingredients in this product which are subject to Section 313 reporting requirements.

COMMENTS: Australian Hazard Code : 3XE

U.S. EPA Signal Word : WARNING

16. OTHER INFORMATION

REVISION SUMMARY

This MSDS replaces Revision #6, dated January 09, 2001. Changes in information are as

follows:

Section 1 (Product and Company Identification)

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