1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name
MUSTANG® INSECTICIDE

Other means of identification

Product Code(s)
1495-A

Synonyms
FMC 56701; A mixture of the stereoisomers (S)-α-cyano-3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylocyclopropanecarboxylate where the ratio of the (S);(1RS,3RS) isomeric pair to the (S); (1RS,3SR) isomeric pair lies in the ratio range 45–55 to 55–45; (S)-cyano(3-phenoxyphenyl)methyl (+)-cis-trans-3-(2,2-dichloroethenyl)-2,2-dimethylocyclopropanecarboxylate

Active Ingredient(s)
Zeta-cypermethrin (4s)

Chemical Family
Pyrethroid Pesticide

Alternate Commercial Name
Mustang 1.5 EW

Recommended Use of the chemical and restrictions on use

Recommended Use:
Insecticide

Restrictions on Use:
Use as recommended by the label.

Supplier Address
FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
mddsinfo@fmc.com (E-Mail General Information)

Emergency telephone number

For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527 3887 (CHEMTREC - Alternate)

Medical Emergencies:
1 800 / 331-3148 (ProPharma Group - U.S.A. & Canada)
1 651 / 632-6793 (ProPharma Group - All Other Countries - Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Acute toxicity - Oral | Category 3
---|---
Acute toxicity - Inhalation (Dusts/Mists) | Category 3
Specific target organ toxicity (single exposure) | Category 3
Specific target organ toxicity (repeated exposure) | Category 2

GHS Label elements, including precautionary statements

**Emergency Overview**

**Danger**

**Hazard Statements**
H301 - Toxic if swallowed
H331 - Toxic if inhaled
H335 - May cause respiratory irritation
H373 - May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements - Prevention**
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response**
P308 + P311 - If exposed or concerned: Call a POISON CENTER or doctor
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P311 - Call a POISON CENTER or doctor
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P330 - Rinse mouth

**Precautionary Statements - Storage**
P405 - Store locked up
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**
P501 - Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**
No hazards not otherwise classified were identified.

**Other Information**
Very toxic to aquatic life with long lasting effects.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Family**
Pyrethroid Pesticide.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeta-cypermethrin</td>
<td>52315-07-8</td>
<td>17.1</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>5-10</td>
</tr>
</tbody>
</table>
Synonyms are provided in Section 1.

### 4. FIRST AID MEASURES

**Eye Contact**
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

**Skin Contact**
Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

**Inhalation**
Move 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.

**Ingestion**
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 or give anything by mouth to an unconscious person. Do not give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed**

**Central nervous system effects.**

This product contains a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Foam, Carbon dioxide (CO₂), Dry chemical, Soft stream or water fog only if necessary.

**Specific Hazards Arising from the Chemical**
None known

**Hazardous Combustion Products**
Carbon oxides (COx), hydrogen cyanide, Hydrogen chloride, Chlorine.

**Explosion data**

**Sensitivity to Mechanical Impact**
No information available.

**Sensitivity to Static Discharge**
No information available.

**Protective equipment and precautions for firefighters**
As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate upwind.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**
Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

**Other**
For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 “Product and Company Identification” above.

**Environmental Precautions**
Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.

**Methods for Containment**
Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

**Methods for cleaning up**
Clean and neutralize spill area, tools and equipment by washing with water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior
7. HANDLING AND STORAGE

Handling
Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

Storage
Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Keep/store only in original container.

Incompatible products
None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>British Columbia</th>
<th>Quebec</th>
<th>Ontario TWAEV</th>
<th>Alberta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td>-</td>
<td>-</td>
<td>TWA: 10 mg/m³ aerosol only</td>
<td>-</td>
</tr>
<tr>
<td>(57-55-6)</td>
<td></td>
<td></td>
<td>TWA: 50 ppm aerosol and vapor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 155 mg/m³ aerosol and vapor</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering measures
Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
For dust, splash, mist or spray exposure, wear chemical protective goggles.

Skin and Body Protection
Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection
Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.

Respiratory Protection
For dust, splash, mist or spray exposures wear a filtering facepiece respirator (N95, R95, or P95) which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization).

Hygiene measures
Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

General information
If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance
White Liquid

Physical State
Liquid
MUSTANG® INSECTICIDE

**Color**
White

**Odor**
Sharp acrid

**Odor threshold**
No information available

**pH**
4.4 - 4.5

**Melting point/freezing point**
Not applicable

**Boiling Point/Range**
No information available

**Flash point**
Not applicable

**Evaporation Rate**
No information available

**Flammability (solid, gas)**
No information available

**Flammability Limit in Air**
Upper flammability limit: No information available
Lower flammability limit: No information available

**Vapor pressure**
No information available

**Vapor density**
No information available

**Density**
8.66 lb/gal

**Specific gravity**
1.04

**Water solubility**
Emulsifies

**Solubility in other solvents**
No information available

**Partition coefficient**
No information available

**Autoignition temperature**
No information available

**Decomposition temperature**
No information available

**Viscosity, kinematic**
No information available

**Viscosity, dynamic**
No information available

**Explosive properties**
No information available

**Oxidizing properties**
No information available

**Molecular weight**
No information available

**Bulk density**
No information available

**10. STABILITY AND REACTIVITY**

**Reactivity**
None under normal use conditions

**Chemical Stability**
Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**
None under normal processing.

**Hazardous polymerization**
Hazardous polymerization does not occur.

**Conditions to avoid**
Heat, flames and sparks.

**Incompatible materials**
None known.

**Hazardous Decomposition Products**
Carbon oxides (COx), hydrogen cyanide, Hydrogen chloride, Chlorine.

**11. TOXICOLOGICAL INFORMATION**

**Product Information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral</td>
<td>234 mg/kg (rat)</td>
</tr>
<tr>
<td>LD50 Dermal</td>
<td>&gt; 2000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>LC50 Inhalation</td>
<td>&gt; 0.89 mg/L (4-hr) (rat)</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Mildly irritating (rabbit).</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Slightly or non-irritating (rabbit).</td>
</tr>
<tr>
<td>Sensitization</td>
<td>Sensitizer</td>
</tr>
</tbody>
</table>

**Information on toxicological effects**

**Symptoms**
Signs of toxicity in laboratory animals included tremors, tonic - clonic convulsions, loss of muscle control, rales, bloody oral discharge, hypersensitivity to touch and ataxia.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic toxicity**
Zeta-cypermethrin: Long-term exposure caused neurotoxicity (body tremors, decreased motor activity), decreased body weight and increased liver weight.

**Mutagenicity**
Zeta-cypermethrin: Not genotoxic in laboratory studies.
Carcinogenicity
Cypermethrin caused an increase in benign lung tumors in mice, but not in rats. EPA has classified cypermethrin as a possible human carcinogen based on this information, but does not regulate based on its low cancer risk.

Neurological effects
Zeta-cypermethrin: Causes neurotoxicity (tremors and decreased motor activity) following acute, subchronic or chronic exposure.

Reproductive toxicity
Zeta-cypermethrin: No toxicity to reproduction in animal studies.

Developmental toxicity
Zeta-cypermethrin: Not teratogenic in animal studies.

STOT - single exposure
May cause damage to organs through prolonged or repeated exposure. See listed target organs below.

STOT - repeated exposure
May cause respiratory irritation. See listed target organs below.

Target organ effects
Zeta-cypermethrin: Central Nervous System (CNS), blood.

Neurological effects
Zeta-cypermethrin: Causes neurotoxicity (tremors and decreased motor activity) following acute, subchronic or chronic exposure.

STOT - single exposure
May cause damage to organs through prolonged or repeated exposure. See listed target organs below.

STOT - repeated exposure
May cause respiratory irritation. See listed target organs below.

Aspiration hazard
No information available.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeta-cypermethrin 52315-07-8</td>
<td></td>
<td>Group 2A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
IARC (International Agency for Research on Cancer)
Group 2A - Probably Carcinogenic to Humans

12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Zeta-cypermethrin (52315-07-8)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeta-cypermethrin</td>
<td>48 h EC50</td>
<td>Crustacea</td>
<td>0.14</td>
<td>µg/L</td>
</tr>
<tr>
<td>Zeta-cypermethrin</td>
<td>96 h LC50</td>
<td>Fish</td>
<td>0.69</td>
<td>µg/L</td>
</tr>
<tr>
<td>Zeta-cypermethrin</td>
<td>72 h EC50</td>
<td>Algae</td>
<td>&gt;1</td>
<td>mg/L</td>
</tr>
<tr>
<td>Zeta-cypermethrin</td>
<td>21 d NOEC</td>
<td>Crustacea</td>
<td>0.01</td>
<td>µg/L</td>
</tr>
<tr>
<td>Zeta-cypermethrin</td>
<td>21 d NOEC</td>
<td>Fish</td>
<td>0.015</td>
<td>µg/L</td>
</tr>
</tbody>
</table>

Persistence and degradability

Bioaccumulation
Zeta-cypermethrin: The substance does not have a potential for bioconcentration.

Mobility
Zeta-cypermethrin: Immobile, Not expected to reach groundwater.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods
Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

Contaminated Packaging
Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

14. TRANSPORT INFORMATION

DOT
UN/ID no: UN3352
Proper Shipping Name: Pyrethroid pesticide, liquid, toxic
Hazard class: 6.1
Packing Group: III
15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
</tr>
</thead>
</table>
Acetic Acid
64-19-7
5000 lb
2270 kg

**FIFRA Information**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**WARNING**

This pesticide is extremely toxic to fish, aquatic invertebrates, oysters and shrimp.

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeta-cypermethrin</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>52315-07-8</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>57-55-6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**International Inventories**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS/ELINC S (Europe)</th>
<th>ENCS (Japan)</th>
<th>China (IECSC)</th>
<th>KECL (Korea)</th>
<th>PICCS (Philippines)</th>
<th>AICS (Australia)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zeta-cypermethrin</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52315-07-8</td>
<td></td>
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<td></td>
<td>X</td>
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<tr>
<td>57-55-6</td>
<td></td>
<td>X</td>
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</tr>
</tbody>
</table>

**Mexico - Grade**

Moderate risk, Grade 2

**WHMIS Statement**

This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**WHMIS Hazard Class**

D1B - Toxic materials
D2B - Toxic materials

**16. OTHER INFORMATION**

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2*</td>
<td>1</td>
<td></td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*Indicates a chronic health hazard.
NFPA/HMIS Ratings Legend
Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Revision date: 2018-04-03
Reason for revision: (M)SDS sections updated

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End of Safety Data Sheet