Material Safety Data Sheet

Mustang Maxx Insecticide

SDS # : 6540-A
Revision Date: 2013-03-22
Version 2.02

This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Mustang Maxx Insecticide

Formula code 6540

Active Ingredient(s) Zeta-cypermethrin

Synonyms FMC 233570; (+/-)-α -cyano(3-phenoxyphenyl)methyl (+/-) cis, trans-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: (RS)- α -cyano-3-phenoxybenzyl (1RS)-cis-trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate;

Chemical Family Pyrethroid Pesticide

Manufacturer
FMC Corporation
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103
General Information:
Phone: (215) 299-6000
E-Mail: msdsinfo@fmc.com

Emergency telephone number

Medical Emergencies:
(800) 331-3148 (U.S.A. & Canada)
+1 (651) 632-6793 (All Other Countries - Collect)
For leak, fire, spill or accident emergencies, call:
+1 800 / 424 9300 (CHEMTREC - U.S.A.)
+1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

2. Hazards identification

Appearance amber

Physical state Liquid

Odor aromatic Solvent

Potential health effects

Principle Routes of Exposure Eye contact, Skin contact, Inhalation, Ingestion.

Acute effects

- **Eyes** Severely irritating (eyes).
- **Skin** Moderately irritating to skin. May cause sensitization by skin contact.
- **Inhalation** May cause drowsiness and dizziness.
- **Ingestion** Toxic if swallowed. Potential for aspiration if swallowed. May cause additional effects as listed under "Inhalation". Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic effects Effects are expected to be similar to those that are seen with acute toxicity.

Environmental hazard Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No	Weight %
Naphtha (petroleum), heavy aromatic	64742-94-5	50-60
2-Methylnaphthalene	91-57-6	<15
Acetophenone	98-86-2	10-20
Zeta-cypermethrin (F2700)	52315-07-8	9.15
Naphthalene	91-20-3	5-10
1-Methylnaphthalene	90-12-0	<7

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 treatment advice.

Inhalation — Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by 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. Do not induce vomiting unless told to do so 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.

Notes to physician — 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. This product contains aromatic hydrocarbons that can produce a severe pneumonitis if aspirated during vomiting.

5. Fire-fighting measures

Flash Point 95 °C / 203 °F
Sensitivity to Mechanical Impact not applicable
Sensitivity to Static Discharge not applicable

Suitable extinguishing media Foam, Carbon dioxide (CO_2), Dry chemical, Soft stream or water fog only if necessary.

NFPA

Health Hazard	2
Flammability	1
Stability	0
Special Hazards	-

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.

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 bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

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

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 at temperatures above -7°C. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container only.

8. Exposure controls/personal protection

Exposure guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
2-Methylnaphthalene 91-57-6	S* TWA: 0.5 ppm			
Acetophenone 98-86-2	TWA: 10 ppm			
Naphthalene 91-20-3	S* STEL 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 50 mg/m³	IDLH: 250 ppm TWA: 10 ppm TWA: 50 mg/m³ STEL: 15 ppm STEL: 75 mg/m³	
1-Methylnaphthalene 90-12-0	S* TWA: 0.5 ppm			
Chemical Name	**British Columbia**	**Quebec**	**Ontario TWAEV**	**Alberta**
2-Methylnaphthalene 91-57-6	TWA: 0.5 ppm Skin		TWA: 0.5 ppm Skin	
Acetophenone 98-86-2	TWA: 10 ppm	TWA: 10 ppm TWA: 49 mg/m³	TWA: 10 ppm	TWA: 10 ppm TWA: 49 mg/m³
Naphthalene 91-20-3	TWA: 10 ppm STEL: 15 ppm Skin	TWA: 10 ppm TWA: 52 mg/m³ STEL: 15 ppm STEL: 79 mg/m³	TWA: 10 ppm STEL: 15 ppm Skin	TWA: 10 ppm TWA: 52 mg/m³ STEL: 15 ppm STEL: 79 mg/m³ Skin
1-Methylnaphthalene 90-12-0	TWA: 0.5 ppm Skin		TWA: 0.5 ppm Skin	

Occupational exposure 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.

Personal Protective Equipment

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.

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 orgainzation).

Eye/face protection For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield.

Skin and body protection Wear long-sleeved shirt, long pants, socks, shoes, and gloves.

Hand protection Protective gloves

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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	amber
Physical state	Liquid
Odor	aromatic Solvent
pH	4.6 @ 22.3°C
Melting Point/Range	No information available.
Freezing point	No information available.
Boiling Point/Range	not applicable
Flash Point	95 °C / 203 °F
Evaporation rate	not applicable
Vapor pressure	No information available.
Vapor density	No information available.
Density	8.72 lb/gal @ 25 °C
Water solubility	No information available
Percent volatile	No information available.
Partition coefficient:	not applicable
Viscosity	40.7 mm2/s at 22.4 °C

9.2 Other information

10. Stability and reactivity

Stability Stable.

Conditions to avoid Excessive heat.

Hazardous decomposition products Carbon oxides, Hydrogen cyanide, Hydrogen chloride, Chlorine.

Hazardous polymerization Hazardous polymerization does not occur.

11. Toxicological information

Acute Toxicity

Large doses of zeta-cypermethrin, ingested by laboratory animals, may produce signs of toxicity including tremors, incoordination, convulsions, staggered gait, and oral discharge.

Eye contact	Severely irritating (eyes)
Skin contact	Moderately irritating to skin
LD50 Dermal	> 5,000 mg/kg (rabbit)
LD50 Oral	310 mg/kg (rat)
LC50 Inhalation:	> 2.03 mg/L 4 hr (rat)
Sensitization	Sensitizer

Chronic Toxicity - Other Ingredient(s)

Chronic Toxicity Effects are expected to be similar to those that are seen with acute toxicity.

Carcinogenicity Cypermethrin caused an increase in benign lung tumors in mice, but not in rats, and was negative for genotoxicity. EPA has classified zeta-cypermethrin as a possible human carcinogen based on this information, but does not regulate based on its low cancer risk. Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).

Mutagenicity Zeta-cypermethrin: Not genotoxic.

Reproductive toxicity Zeta-cypermethrin: No toxicity to reproduction.

Neurological Effects Cypermethrin did not cause neurotoxicity in animal experiments.

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

Target Organ Effects Cypermethrin: Liver enlargement is often noted in laboratory animals that have ingested large doses of during their life span.

Chemical Name	ACGIH	IARC	NTP	OSHA	NIOSH - Target Organs
Naphthalene		2B	Reasonably Anticipated	X	eyes,blood,liver,kidneys,skin,CNS

12. Ecological information

Marine pollutant Zeta-cypermethrin

Ecotoxicity

Zeta-cypermethrin (F2700) (52315-07-8)

Active Ingredient(s)	Duration	Species	Value	Units:
Zeta-cypermethrin	LC50	Aquatic organisms	0.005 - 0.15	µg/L
	LC50	Fish	0.07 - 2.37	µg/L
	LD50 Oral	Bobwhite quail	>2000	mg/kg
	LD50	Bee	0.0014 - 0.043	µg/bee

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Naphtha (petroleum), heavy aromatic	2.5 mg/L EC50 72 h (Skeletonema costatum)	LC50 19 mg/L Pimephales promelas 96 h LC50 2.34 mg/L Oncorhynchus mykiss 96 h LC50 1740 mg/L Lepomis macrochirus 96 h LC50 45 mg/L Pimephales promelas 96 h LC50 41 mg/L Pimephales promelas 96 h		EC50 0.95 mg/L 48 h
Acetophenone		LC50 162 mg/L Pimephales promelas 96 h LC50 155 mg/L Pimephales promelas 96 h		
Naphthalene	0.4 mg/L EC50 72 h (Skeletonema costatum)	LC50 5.74-6.44 mg/L Pimephales promelas 96 h LC50 1.6 mg/L Oncorhynchus mykiss 96 h LC50 0.91-2.82 mg/L Oncorhynchus mykiss 96 h LC50 1.99 mg/L Pimephales promelas 96 h LC50 31.0265 mg/L Lepomis macrochirus 96 h		LC50 2.16 mg/L 48 h EC50 1.96 mg/L 48 h EC50 1.09 - 3.4 mg/L 48 h

Environmental Fate

Zeta-cypermethrin (F2700) (52315-07-8)

Active Ingredient(s)	Type of Test	Result
Zeta-cypermethrin	Bioconcentration factor (BCF) Bluefill sunfish (Lepomis macrochirus)	443
	Half-life in soil	2 - 4 weeks
	log Pow	5
	Mobility in soil	Not expected to reach groundwater
	Stability in water	Hydrolysis unstable at pH 9, half life 20-29 days at pH 5 and 7.

Chemical Name	**log Pow**
Naphtha (petroleum), heavy aromatic	2.9 - 6.1
2-Methylnaphthalene	3.86
Acetophenone	1.58 - 1.73
Naphthalene	3.3

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.

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 Not regulated for transportation if shipped in Non Bulk packaging. The classification below pertains to the shipment in Bulk packaging.

- **Packaging Type** Bulk
- **UN/ID No** UN3082
- **Hazard Class** 9
- **Packing group** III
- **Marine pollutant** Zeta-cypermethrin
- **Description** UN3082 Environmentally hazardous substance, liquid, n.o.s. (zeta-cypermethrin (F2700)), 9, PG III, Marine Pollutant

TDG not regulated

- **UN/ID No** UN3082
- **Hazard Class** 9
- **Packing group** III
- **Marine pollutant** Zeta-cypermethrin. The "Marine Pollutant" marking is only applicable when shipped by vessel, and is not applicable when shipped only by road or rail in Canada.

ICAO/IATA

- **UN/ID No** UN3082
- **Hazard Class** 9
- **Packing group** III
- **Marine pollutant** Zeta-cypermethrin

IMDG/IMO

- **UN/ID No** UN3082
- **Hazard Class** 9
- **Packing group** III
- **EmS No.** F-A, S-F

Marine pollutant Zeta-cypermethrin

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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Acetophenone	98-86-2	10-20	1.0
Naphthalene	91-20-3	5-10	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	yes
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

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):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Acetophenone	5000 lb	
Naphthalene	100 lb	

TSCA Inventory (United States of America)

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 4 - Chemical Test Rules (40 CFR 799)	U.S. - TSCA (Toxic Substances Control Act) - Section 5(a)(2) - Chemicals with Significant New Use Rules (SNURs)
Naphthalene	40 CFR 799.5115	

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping
Naphthalene	PAIR: 08/04/1995
Chemical Name	**U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances**
Naphthalene	06/01/1987

International Regulations

Mexico - Grade Moderate risk, Grade 2

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class D2A Very toxic materials
D2B Toxic materials

16. Other information

Revision Date: 2013-03-22
Reason for revision: (M)SDS sections updated.

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End of Material Safety Data Sheet