

MATERIAL SAFETY DATA SHEET

STALLION™ EC INSECTICIDE



MSDS Ref. No.: 100000016351

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Revision No.: 1

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200. The information contained herein is for the concentrate as packaged, unless otherwise noted.

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: STALLION™ EC INSECTICIDE

PRODUCT CODE: 6550

ACTIVE INGREDIENT(S): Zeta-cypermethrin (F2700)*; Chlorpyrifos**

CHEMICAL FAMILY: Pyrethroid Pesticide*; Organophosphate Pesticide**

MOLECULAR FORMULA: C₂₂H₁₉Cl₂NO₃*; C₉H₁₁Cl₃NO₃PS**

SYNONYMS: FMC 233570; Cyclopropanecarboxylic acid, cis-(+)-3-(2,2-dichloroethenyl)-2,2-dimethyl-, (S)-cyano(3-phenoxyphenyl)methyl ester, AND Cyclopropanecarboxylic acid, trans-(+)-3-(2,2-dichloroethenyl)-2,2-dimethyl-, (S)-cyano(3-phenoxyphenyl)methyl ester)

ALTERNATE PRODUCT NAME(S): F9047-2 Insecticide

GENERAL USE: Insecticide

MANUFACTURER

FMC CORPORATION
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103
(215) 299-6000 (General Information)
msdsinfo@fmc.com (Email - General Information)

EMERGENCY TELEPHONE NUMBERS

(800) 331-3148 (Medical - U.S.A. & Canada)
(651) 632-6793 (Medical - Collect - All Other Countries)

For leak, fire, spill, or accident emergencies, call:
(800) 424-9300 (CHEMTREC - U.S.A. & Canada)
(703) 527-3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

- Transparent straw to amber colored liquid with a petroleum odor.
- Moderately combustible. May support combustion if heated above the product's flash point (see Section 9, "Physical and Chemical Properties" below).
- Thermal decomposition and burning may form toxic by-products.
- For large exposures or fire, wear personal protective equipment.
- Moderately toxic if swallowed.
- Severely irritating to the skin and eyes.
- May cause sensitization by skin contact.
- Highly toxic to fish and aquatic organisms. Keep out of drains and water courses.

POTENTIAL HEALTH EFFECTS: Effects from overexposure result from either swallowing, or coming into contact with the skin or eyes. Symptoms of overexposure include headaches, weakness, abdominal cramps, nausea, excessive salivation, perspiration, blurred vision, tearing, pin-point pupils, convulsions, tremor and coma. Contact with zeta-cypermethrin may produce skin sensations such as numbing, burning and tingling. These sensations are reversible and usually subside within 12 hours.

MEDICAL CONDITIONS AGGRAVATED: None presently known.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt.%	EC No.	EC Class
Zeta-cypermethrin (F2700)	52315-07-8	3.08	257-842-9	Xn-Xi-N; R20/22-43-50/53
Chlorpyrifos	2921-88-2	31.75	015-084-00-4	T-N; R25, R50/53
Isobutyl alcohol	78-83-1	1 - 5	201-148-0	Xi; R10-37/38-41-67
Surfactant Blend		5 - 10	None	Not classified
Aromatic Hydrocarbons	64742-94-5	40 - 50	265-198-5	Xn; R65

4. FIRST AID MEASURES

EYES: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a medical doctor immediately.

SKIN: Immediately flush with plenty of water while removing contaminated clothing and/or shoes, and thoroughly wash with soap and water. See a medical doctor immediately.

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 anything to an unconscious person.

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

NOTES TO MEDICAL DOCTOR: This product is severely irritating to the skin and moderately irritating to the eyes. It has moderate oral, and low dermal and inhalation toxicity. It is sensitizing to the skin. Chlorpyrifos is a cholinesterase inhibitor. Contains aromatic hydrocarbons that may produce a severe pneumonitis if aspirated during vomiting. Consideration should be given to gastric lavage with an endotracheal tube in place. 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: Moderately combustible. When heated above the flash point, this material releases vapors which, when mixed with air, can burn or be explosive.

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.

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 contaminated area, scrub area with a solution of detergent (e.g. commercial product such as SuperSoap™, Tide®, Spic and Span®, or other high pH detergent) and water. Let solution sit for 5 minutes. Use a stiff brush to scrub affected area. Repeat if necessary to remove visible staining. Additional decontamination can be made by applying bleach (Clorox® or equivalent) to affected area.

Absorb wash-liquid as noted above, remove visibly contaminated soil and place into recovery / disposal container (plastic, open-top steel drum or equivalent). Place all clean-up material in a container, seal and dispose of in accordance with the method outlined in Section 13 "Disposal Considerations" below.

For further information on spill clean-up, waste disposal, or return of salvaged product, call the FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

7. HANDLING AND STORAGE

HANDLING AND STORAGE: Store in a cool, dry, well-ventilated place. Do not store below -7°C (20°F). Avoid excess heat. Do not use or store in or around the house, 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

EXPOSURE LIMITS

Chemical Name	ACGIH	OSHA	Supplier
Chlorpyrifos	0.1 mg/m ³ (TWA)		
Isobutyl alcohol	50 ppm (TWA)	100 ppm 300 mg/m ³ (PEL)	
Aromatic Hydrocarbons			18 ppm

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 exposures 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).

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

WORK HYGIENIC PRACTICES: 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 at the end of the workday.

COMMENTS:

Personal protective recommendations for mixing or applying this product are prescribed on the product label. Information stated above provides useful, additional guidance for individuals whose use or handling of this product is not guided by the product label.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR:	Petroleum
APPEARANCE:	Transparent straw to amber colored liquid
DENSITY / WEIGHT PER VOLUME:	8.94 lbs/gal.
FLASH POINT:	58 °C (136 °F)
pH:	4.3
SPECIFIC GRAVITY:	Not available
VISCOSITY:	22.4 mPasec @ 23.5 °C 17 mPasec @ 44.5 °C

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID:	Excessive heat and fire.
STABILITY:	Stable
POLYMERIZATION:	Will not occur
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of sulfur and phosphorus, mercaptans, carbon monoxide, carbon dioxide, hydrogen cyanide, chloride and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Moderately irritating (rabbit)

SKIN EFFECTS: Severely irritating (rabbit)

DERMAL LD₅₀: > 5,000 mg/kg (rabbit)

ORAL LD₅₀: 55 - 175 mg/kg (rat)

INHALATION LC₅₀: 0.52 - 2.05 mg/l (4 h) (rat)

SENSITIZATION: Skin sensitizer

ACUTE EFFECTS FROM OVEREXPOSURE: This product is severely irritating to the skin and moderately irritating to the eyes. It has moderate oral, and low dermal and inhalation toxicity. It is sensitizing to the skin.

Large doses of zeta-cypermethrin, ingested by laboratory animals, may produce signs of toxicity including tremors, incoordination, convulsions, staggered gait, and oral discharge. Experience to date indicates that contact with zeta-cypermethrin may produce skin sensations such as numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours. Inhalation of aromatic hydrocarbon vapors may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation. Vomiting after ingestion of this product may cause aspiration of aromatic hydrocarbons into the lungs, which may result in fatal pulmonary edema.

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. Chronic exposure to aromatic hydrocarbons may cause headaches, dizziness, loss of sensations or feelings (such as numbness), and liver and kidney damage.

CARCINOGENICITY:

NTP: Not listed
IARC: Not listed
OSHA: Not listed
OTHER: (ACGIH) Not listed

CARCINOGENICITY:

Chemical Name	IARC	NTP	OSHA	Other
Chlorpyrifos		No	No	

12. ECOLOGICAL INFORMATION

No data available for the formulation.

ECOTOXICOLOGICAL INFORMATION: This product is considered highly toxic to fish and aquatic organisms. Care should be taken to avoid environmental contamination.

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 that 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)

PACKAGING TYPE:	Non-Bulk
PROPER SHIPPING NAME:	Organophosphorus pesticides, liquid, toxic, flammable
TECHNICAL NAME(S):	Chlorpyrifos, Isobutyl alcohol
PRIMARY HAZARD CLASS / DIVISION:	6.1
HAZARD CLASS, SUBSIDIARY:	3
UN/NA NUMBER:	UN 3017
PACKING GROUP:	III
REPORTABLE QUANTITY (RQ):	Chlorpyrifos - 1 lb.
PACKAGING TYPE:	Bulk
PROPER SHIPPING NAME:	Organophosphorus pesticides, liquid, toxic, flammable

TECHNICAL NAME(S):	Chlorpyrifos, Isobutyl alcohol
PRIMARY HAZARD CLASS / DIVISION:	6.1
HAZARD CLASS, SUBSIDIARY:	3
UN/NA NUMBER:	UN 3017
PACKING GROUP:	III
MARINE POLLUTANT:	Chlorpyrifos, Zeta-cypermethrin
REPORTABLE QUANTITY (RQ):	Chlorpyrifos

OTHER INFORMATION:

HARMONIZED SYSTEM NUMBERS:

Import to the U.S.A.: 3808.91.5000

Export from the U.S.A.: 3808.91.0000

15. REGULATORY INFORMATION**UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):**

Not listed

SECTION 311 HAZARD CATEGORIES (40 CFR 370):

Immediate, Delayed, Fire

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; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:
None

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):

This product does not, to our knowledge, contain any toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)**CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):**

Listed

<u>Chemical Name</u>	<u>RQ</u>
Chlorpyrifos	1 lb
Isobutyl alcohol	5,000 lb

HAZARD AND RISK PHRASE DESCRIPTIONS:

EC Symbols:	T	(Toxic)
	Xn	(Harmful)
	Xi	(Irritant)
	N	(Dangerous for the environment)
EC Risk Phrases:	R10	(Flammable)
	R20/22	(Harmful by inhalation and if swallowed.)
	R25	(Toxic if swallowed.)
	R37/38	(Irritating to respiratory system and to skin.)
	R43	(May cause sensitization by skin contact.)
	R50/53	(Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.)
	R65	(Harmful: may cause lung damage if swallowed.)
	R67	(Vapors may cause drowsiness and dizziness.)

16. OTHER INFORMATION**REVISION SUMMARY:**

New MSDS.

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