

MATERIAL SAFETY DATA SHEET

CYNOFF® WP INSECTICIDE



MSDS Ref. No.: 52315-07-8-3

Date Approved: 03/30/2010

Revision No.: 17

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: | CYNOFF® WP INSECTICIDE |
| PRODUCT CODE: | 1070 |
| ACTIVE INGREDIENT(S): | Cypermethrin |
| CHEMICAL FAMILY: | Pyrethroid Pesticide |
| MOLECULAR FORMULA: | C ₂₂ H ₁₉ Cl ₂ NO ₃ (cypermethrin) |
| SYNONYMS: | FMC 30980; (+/-)-a-cyano(3-phenoxyphenyl)methyl (+/-) cis, trans-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: (RS)-a-cyano-3-phenoxybenzyl (1RS)-cis-trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate |

MANUFACTURER

FMC CORPORATION
Agricultural Products Group
1735 Market Street
Philadelphia, PA 19103
(800) 321-1362 (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:

- Light tan powder with a faint odor.
- Slightly combustible. May support combustion at elevated temperatures. Finely dispersed particles can form explosive mixtures in air.
- 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.
- Prolonged, repeated exposure to respirable crystalline silica can cause silicosis or possibly cancer. See section 11 for additional details.

POTENTIAL HEALTH EFFECTS: Effects from overexposure result from either inhaling or coming into contact with the skin. Symptoms of overexposure include nasal discharge, convulsions 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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Chemical Name | CAS# | Wt.% | EC No. | EC Class |
|------------------|------------|------|-----------|---------------------------|
| Cypermethrin | 52315-07-8 | 40 | 257-842-9 | Xn-Xi-N; R20/22-37-50/53 |
| Surfactant Blend | | <4.5 | None | Not classified |
| Silica, quartz | 14808-60-7 | <0.5 | 238-878-4 | Not classified in Annex I |

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.

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 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 has low oral and dermal toxicity. It is expected to have low inhalation toxicity. It is minimally irritating to the eyes, and non-irritating to the skin. Do not administer milk, cream or other substances which contain vegetable or animal fats, as they enhance absorption. Central nervous system stimulation should be controlled with sedation by, e.g., barbiturates. 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. May support combustion at elevated temperatures. Finely dispersed particles can form explosive mixtures in air.

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. Large spills should be covered to prevent dispersal. For dry material, use a wet sweeping compound or water to prevent the formation of dust. If water is used, prevent runoff or dispersion of excess liquid by diking and absorbing with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump all waste material, including absorbent, 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 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

EXPOSURE LIMITS

| Chemical Name | ACGIH | OSHA | Supplier |
|----------------|--|---|----------|
| Silica, quartz | 0.025 mg/m ³ (8-hour TWA) (respirable fraction) | (10/(% SiO ₂ + 2) mg/m ³ (8-hour TWA, respirable dust)) (30/(% SiO ₂ + 2) mg/m ³ (8-hour TWA, total dust)) | |

ENGINEERING CONTROLS: No open flames. Prevent deposition of dust; use closed system, consider use of dust explosion-proof electrical equipment and lighting. Use local exhaust at all process locations where dust may be emitted. Ventilate all transport vehicles prior to unloading.

PERSONAL PROTECTIVE EQUIPMENT

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

RESPIRATORY: For dust 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 rubber, neoprene or nitrile. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------------------------|--|
| ODOR: | Faint |
| APPEARANCE: | Light-tan powder |
| DENSITY / WEIGHT PER VOLUME: | (Bulk) 0.28 - 0.38 g/mL (18 - 24 lb/cu ft) |

| | |
|-----------------------------|--------------------------|
| MOLECULAR WEIGHT: | 416.3 (cypermethrin) |
| pH: | 8.7 @ 20°C (5% in water) |
| SOLUBILITY IN WATER: | Disperses |

10. STABILITY AND REACTIVITY

| | |
|--|---|
| CONDITIONS TO AVOID: | Excessive heat and fire. |
| STABILITY: | Stable |
| POLYMERIZATION: | Will not occur |
| HAZARDOUS DECOMPOSITION PRODUCTS: | Heat and fire may result in thermal decomposition and the release of carbon monoxide, carbon dioxide, hydrogen cyanide, chlorine and hydrogen chloride. |

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: Minimally irritating (rabbit)

SKIN EFFECTS: Non-irritating (rabbit)

DERMAL LD₅₀: > 2,000 mg/kg (rabbit)

ORAL LD₅₀: 2,342 mg/kg (rat)

INHALATION LC₅₀: Cypermethrin: 2.5 mg/l (4 h) (rat)

ACUTE EFFECTS FROM OVEREXPOSURE: This product has low oral and dermal toxicity. It is expected to have low inhalation toxicity. It is minimally irritating to the eyes, and non-irritating to the skin. Signs of toxicity in laboratory animals included convulsions, ataxia, abdominogenital staining and, oral and ocular discharges. 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.

CHRONIC EFFECTS FROM OVEREXPOSURE: No data available for the formulation. In studies with laboratory animals, cypermethrin did not cause reproductive toxicity, teratogenicity, neurotoxicity or carcinogenicity in male and female rats and male mice. Cypermethrin caused an increase in benign lung tumors in female mice at 1600 ppm in the diet. The EPA concluded on a weight of evidence approach that cypermethrin represents a low oncogenic potential to female mice at this dose level (approximately 228 mg/kg/day). Liver enlargement is often noted in laboratory animals that have ingested large doses of cypermethrin during their life span. An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosome aberrations. Repeated overexposure to crystalline silica for extended periods has caused acute silicosis. IARC has classified crystalline silica, inhaled in the form of quartz or cristobalite from occupational sources, as carcinogenic to humans (Group 1). NTP has classified respirable crystalline silica (quartz, cristobalite and tridymite) as "known to be a

human carcinogen". The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that silica quartz is a suspected human carcinogen (A2 - limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals with relevance to humans).

CARCINOGENICITY:

| Chemical Name | IARC | NTP | OSHA | Other |
|----------------|------|------------------|------------|------------|
| Silica, quartz | 1 | Known Carcinogen | Not listed | (ACGIH) A2 |

12. ECOLOGICAL INFORMATION

Unless otherwise indicated, the data presented below are for the active ingredient(s).

ENVIRONMENTAL DATA: When applied at agricultural use rates, cypermethrin has a moderate rate of degradation in the soil. At termiticidal use rates, cypermethrin degrades at a slower rate that is governed by soil characteristics (e.g., pH). The rate of cypermethrin hydrolysis is somewhat faster under alkaline conditions than at neutral or acidic pH. Cypermethrin has a high affinity for organic matter and a Log Pow of 5.0, but has demonstrated a low potential for bioconcentration (BCF = 443). Cypermethrin is not mobile in soil.

ECOTOXICOLOGICAL INFORMATION: Cypermethrin is considered highly toxic to fish and aquatic arthropods, and has LC₅₀ values which range from 0.004 µg/L to 3.6 µg/L. The aquatic arthropods tended to be some of the more sensitive species. 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 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.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

| | |
|---|---|
| PACKAGING TYPE: | Non-Bulk |
| PROPER SHIPPING NAME: | Not regulated as a hazardous material |
| PACKAGING TYPE: | Bulk |
| PROPER SHIPPING NAME: | Environmentally hazardous substance, solid, n.o.s. |
| TECHNICAL NAME(S): | Cypermethrin |
| PRIMARY HAZARD CLASS / DIVISION: | 9 |
| UN/NA NUMBER: | UN 3077 |
| PACKING GROUP: | III |
| MARINE POLLUTANT: | Cypermethrin |

INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

| | |
|---|---|
| PACKAGING TYPE: | Non-Bulk |
| PROPER SHIPPING NAME: | Environmentally hazardous substance, solid, n.o.s. |
| TECHNICAL NAME(S): | Cypermethrin |
| PRIMARY HAZARD CLASS / DIVISION: | 9 |
| UN/NA NUMBER: | UN 3077 |
| PACKING GROUP: | III |
| MARINE POLLUTANT: | Cypermethrin |
| ADDITIONAL INFORMATION: | EmS Number: F-A, S-F |

ADR - EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD

| | |
|---|---|
| PACKAGING TYPE: | Non-Bulk |
| PROPER SHIPPING NAME: | Environmentally hazardous substance, solid, n.o.s. |
| TECHNICAL NAME(S): | Cypermethrin |
| PRIMARY HAZARD CLASS / DIVISION: | 9 |
| CLASSIFICATION CODE: | M7 |
| UN/NA NUMBER: | UN3077 |
| PACKING GROUP: | III |
| ADDITIONAL INFORMATION: | Environmentally Hazardous Substance: Cypermethrin |

**INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) /
INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)**

| | |
|---|---|
| PACKAGING TYPE: | Non-Bulk |
| PROPER SHIPPING NAME: | Environmentally hazardous substance, solid, n.o.s. |
| TECHNICAL NAME(S): | Cypermethrin |
| PRIMARY HAZARD CLASS / DIVISION: | 9 |
| UN/NA NUMBER: | UN3077 |
| PACKING GROUP: | III |
| ADDITIONAL INFORMATION: | Environmentally Hazardous Substance: Cypermethrin |

OTHER INFORMATION:**HARMONIZED SYSTEM:**

Import to the U.S.A.: 3808.91.2500

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

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):

There are no ingredients in this product, which are subject to Section 313 reporting
requirements.

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

Not listed

FEDERAL INSECTICIDE FUNGICIDE RODENTICIDE ACT

U.S. EPA Signal Word: WARNING

HAZARD AND RISK PHRASE DESCRIPTIONS:

| | | |
|------------------|--------|--|
| EC Symbols: | Xn | (Harmful) |
| | Xi | (Irritant) |
| | N | (Dangerous for the environment) |
| EC Risk Phrases: | R20/22 | (Harmful by inhalation and if swallowed.) |
| | R37 | (Irritating to respiratory system.) |
| | R50/53 | (Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.) |

16. OTHER INFORMATION**NFPA**

| | |
|--------------|---|
| Health | 1 |
| Flammability | 1 |
| Reactivity | 0 |
| Special | |

NFPA (National Fire Protection Association)

Degree of Hazard Code:

4 = Extreme

3 = High

2 = Moderate

1 = Slight

0 = Insignificant

REVISION SUMMARY:

This MSDS replaces Revision #16, dated October 15, 2007.

Changes in information are as follows:

Section 2 (Hazards Identification)

Section 3 (Composition / Information on Ingredients)

Section 4 (First Aid Measures)

Section 8 (Exposure Controls / Personal Protection)

Section 11 (Toxicological Information)

Section 14 (Transport Information)
Section 15 (Regulatory Information)
Section 16 (Other Information)

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