

Material Safety Data Sheet

CYNOFF® EC INSECTICIDE

SDS #: 1167-A
Revision Date: 2012-02-10
Version 1



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 | CYNOFF® EC INSECTICIDE |
| Formula code | 1167-A |
| Active Ingredient(s) | Cypermethrin |
| Synonyms | FMC 30980; (RS)- α -cyano-3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate; cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate |
| Chemical Family | Pyrethroid Pesticide |
| Recommended use | Insecticide |
| 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 (800) 331-3148 (FMC - U.S.A. & Canada) (716) 735-3765 (FMC - Reverse charges) 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 liquid |
| Physical state | liquid |
| Odor | soapy |
| Physical or Chemical Hazards | . |
| Potential health effects | |
| Acute effects | |
| Eyes | May cause moderate eye irritation. |
| Skin | May cause moderate skin irritation. May cause sensitization by skin contact. |
| Inhalation | May cause drowsiness and dizziness. May cause additional affects as listed under "Ingestion". |
| Ingestion | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression. |
| 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 % |
|---|------------|----------|
| Methyl laurate | 111-82-0 | 50-60 |
| Cypermethrin | 52315-07-8 | 24.8 |
| Benzenesulfonic acid, dodecyl-, branched, calcium salts | 70528-83-5 | 1-5 |

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 person 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. 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 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. |

5. Fire-fighting measures

| | |
|---|---|
| Flash Point Method | 115 °C / 239 °F closed cup |
| Sensitivity to Mechanical Impact Sensitivity to Static Discharge | not applicable not applicable |
| Suitable extinguishing media | Carbon dioxide (CO ₂), Dry chemical, Alcohol-resistant foam, Water spray. |
| Protective equipment and precautions for firefighters | Wear self-contained breathing apparatus and protective suit. |

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 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

| | |
|-----------------------------------|---|
| <u>Exposure guidelines</u> | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
|-----------------------------------|---|

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 mask. |
| 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

| | |
|----------------------------|--------------------------|
| Appearance | amber liquid |
| Color | amber |
| Physical state | liquid |
| Odor | soapy |
| pH | 5.5 |
| Melting Point/Range | 0 °C / 32 °F |
| Freezing point | No information available |

| | |
|---------------------------------|----------------------------|
| Boiling Point/Range | No information available. |
| Flash Point | 115 °C / 239 °F closed cup |
| Evaporation rate | No information available |
| Autoignition Temperature | No information available. |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Density | 8.04 lb/gal |
| Specific Gravity | 0.96 @ 20 °C |
| Water solubility | Emulsifies |
| Percent volatile | No information available |
| Partition coefficient: | No information available. |
| Viscosity | No information available |
| Oxidizing properties | not applicable |

10. Stability and reactivity

| | |
|---|---|
| Stability | Stable |
| Conditions to avoid | Heat, flames and sparks |
| Hazardous decomposition products | Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon oxides, Hydrogen cyanide, Chlorine, Hydrogen chloride. |
| Hazardous polymerization | Hazardous polymerization does not occur |

11. Toxicological information

Acute Toxicity

Large doses of cypermethrin ingested by laboratory animals produced signs of toxicity including loss of motor control, tremors, decreased activity, urinary incontinence, incoordination, increased sensitivity to sound and convulsions.

Eye contact Moderately irritating (rabbit).

Skin contact Moderately irritating (rabbit).

LD50 Dermal > 2000 mg/kg (rabbit)

LD50 Oral 1085 mg/kg (rat)

LC50 Inhalation: 12.35 mg/L 1 hr (rat) - Maximum attainable concentration (zero mortality)

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 Cypermethrin: Not genotoxic.

Reproductive toxicity Cypermethrin: No toxicity to reproduction.

Neurological Effects Cypermethrin did not cause neurotoxicity in animal experiments.

Developmental Toxicity 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.

12. Ecological information**Marine pollutant Ecotoxicity**

Cypermethrin

Ecotoxicity effects

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

Cypermethrin (52315-07-8)

| Active Ingredient(s) | Duration | Species | Value | Units |
|----------------------|-----------|-------------------|--------------|--------|
| Cypermethrin | LC50 | Aquatic organisms | 0.005 - 0.13 | µg/L |
| | LC50 | Fish | 0.09 - 3.42 | µg/L |
| | LD50 Oral | Bobwhite quail | > 2000 | mg/kg |
| | LD50 | Bee | 0.023-0.56 | µg/bee |

| Chemical Name | Toxicity to algae | Toxicity to fish | Toxicity to microorganisms | Toxicity to daphnia and other aquatic invertebrates |
|----------------|---|--|----------------------------|---|
| Methyl laurate | 1.5 mg/L EC50 96 h (Desmodesmus subspicatus) | LC50 > >1000 mg/L Lepomis macrochirus 96 h | | |

Environmental Fate**Cypermethrin (52315-07-8)**

| Active Ingredient(s) | Type of Test | Result |
|----------------------|-------------------------------|--|
| Cypermethrin | Bioconcentration factor (BCF) | 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 |
|----------------|---------|
| Methyl laurate | 6.02 |

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.

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Hazard Class 9
UN/ID No UN3082
Packing group III
Marine pollutant Cypermethrin
Description UN3082, Environmentally hazardous substance, liquid, toxic (Cypermethrin), 9, PG III, Marine Pollutant
Additional information When shipped in BULK this product is classified as a Marine Pollutant.

TDG

Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Hazard Class 9
UN/ID No UN3082
Packing group III
Marine pollutant Cypermethrin.
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Cypermethrin), 9, PG III, Marine Pollutant

ICAO/IATA

UN/ID No UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Hazard Class 9
Packing group III
Marine pollutant Cypermethrin
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Cypermethrin), 9, PG III, Marine Pollutant

IMDG/IMO

Proper shipping name Environmentally hazardous substance, liquid, n.o.s.
Hazard Class 9
UN/ID No UN3082
Packing group III
EmS No. F-A, S-F
Marine pollutant Cypermethrin
Description UN3082, Environmentally hazardous substance, liquid, n.o.s. (Cypermethrin), 9, PG III, Marine Pollutant

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

| | |
|--|-----|
| 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, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

International Regulations

Mexico - Grade

Slight risk, Grade 1

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

D2B Toxic materials



16. Other information

Revision Date: 2012-02-10
Reason for revision: (M)SDS sections updated.

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End of Material Safety Data Sheet