SAFETY DATA SHEET
CYNOFF® EC INSECTICIDE

SDS #: 1167-A
Revision date: 2016-06-28
Format: NA
Version 1.05

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name CYNOFF® EC INSECTICIDE

Other means of identification

Product Code(s) 1167-A

Synonyms CYPERMETHRIN (FMC 30980); (RS)-α-cyano-3-phenoxybenzyl
(1RS,3RS:1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (CAS name); cyano(3-phenoxyphenyl)methyl
3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC name)

Active Ingredient(s) Cypermethrin

Chemical Family Pyrethroid Pesticide

Recommended use of the chemical and restrictions on use

Recommended Use: Insecticide

Restrictions on Use: Use as recommended by the label

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

Emergency telephone number

Medical Emergencies:
1 800 / 331-3148 (PROSAR - U.S.A. & Canada)
1 651 / 632-6793 (PROSAR - 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

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Acute toxicity - Oral</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
</tbody>
</table>
GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Warning

**Hazard Statements**
H302 - Harmful if swallowed
H313 - May be harmful in contact with skin
H322 - Harmful if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness

Precautionary Statements - Prevention
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
Precautionary Statements - Response
P314 - Get medical advice/attention if you feel unwell
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
P330 - Rinse mouth

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

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypermethrin</td>
<td>52315-07-8</td>
<td>24.81</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 (within the U.S. and Canada) 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 unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed
Central nervous system effects.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically. 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
Carbon dioxide (CO₂), Dry chemical, Alcohol-resistant foam, Water spray.

Specific Hazards Arising from the Chemical
None known

Explosion data
None known

Sensitivity to Mechanical Impact
Not sensitive.

Sensitivity to Static Discharge
Not sensitive.

Protective equipment and precautions for firefighters
Wear self-contained breathing apparatus and protective suit.

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
See Section 12 for additional Ecological Information.

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.

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

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

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

If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin and Body Protection

Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection

Protective gloves

Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Amber Liquid</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Amber</td>
</tr>
<tr>
<td>Odor</td>
<td>Soapy</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>5.5</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>0 °C / 32 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>115 °C / 239 °F Closed cup</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>0.96 @ 20 °C</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Emulsifies</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

**Reactivity**
Not applicable

**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**
Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon oxides (COx), Hydrogen cyanide, Chlorine, Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION

**Product Information**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral</td>
<td>1105 mg/kg (rat)</td>
</tr>
<tr>
<td>LD50 Dermal</td>
<td>&gt; 2000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>LC50 Inhalation</td>
<td>1.8 mg/L (rat) 4 hr</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Minimally irritating.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Minimally irritating.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>Non-sensitizing.</td>
</tr>
</tbody>
</table>

**Information on toxicological effects**

**Symptoms**
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.

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

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

**Mutagenicity**
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**
Cypermethrin: Causes clinical signs of neurotoxicity (body tremors, decreased motor activity and impaired gait) following acute, subchronic or chronic exposure.

**Reproductive toxicity**
Cypermethrin: No toxicity to reproduction in animal studies.

**Developmental toxicity**
Cypermethrin: Not teratogenic in animal studies.

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

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

**Target organ effects**
Cypermethrin: Central Nervous System.

**Neurological effects**
Cypermethrin: Causes clinical signs of neurotoxicity (body tremors, decreased motor activity and impaired gait) following acute, subchronic or chronic exposure.

**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>Cypermethrin</td>
<td></td>
<td>Group 2A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Active Ingredient(s)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypermethrin</td>
<td>48 h EC50</td>
<td>Crustacea</td>
<td>0.3</td>
<td>µg/L</td>
</tr>
<tr>
<td>Cypermethrin</td>
<td>96 h LC50</td>
<td>Fish</td>
<td>2.8</td>
<td>µg/L</td>
</tr>
<tr>
<td>Cypermethrin</td>
<td>72 h EC50</td>
<td>Algae</td>
<td>&gt; 0.1</td>
<td>mg/L</td>
</tr>
<tr>
<td>Cypermethrin</td>
<td>21 d NOEC</td>
<td>Crustacea</td>
<td>0.04</td>
<td>µg/L</td>
</tr>
<tr>
<td>Cypermethrin</td>
<td>21 d NOEC</td>
<td>Fish</td>
<td>0.03</td>
<td>µg/L</td>
</tr>
<tr>
<td>Cypermethrin</td>
<td>96 h NOEC</td>
<td>Algae</td>
<td>1.3</td>
<td>mg/L</td>
</tr>
</tbody>
</table>

Persistence and degradability


Bioaccumulation

Cypermethrin: The substance has a potential for bioconcentration.

Mobility

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.

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.

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, toxic (Cypermethrin), 9, PGIII, Marine Pollutant

TDG

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

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, toxic (Cypermethrin), 9, PGIII, Marine Pollutant

ICAO/IATA

UN/ID no       UN3082
Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s.
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>Category</th>
<th>Value</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 does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

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):

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:

CAUTION
Harmful if inhaled, swallowed or absorbed through the skin. Causes moderate eye irritation. This product is extremely toxic to fish and other aquatic organisms.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
International Inventories

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS/ELINCS (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>Cypermethrin 52315-07-8</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mexico - Grade
Serious risk, Grade 3

WHMIS Hazard Class
D1B - Toxic materials
D2A - Very 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></td>
<td>2</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>HMIS</td>
<td>Health Hazards</td>
<td>Flammability</td>
<td>Physical hazard</td>
<td>Personal Protection</td>
</tr>
<tr>
<td></td>
<td>2*</td>
<td>1</td>
<td>0</td>
<td>X</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: 2016-06-28
Reason for revision: (M)SDS sections updated

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FMC Corporation

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End of Safety Data Sheet