

# Material Safety Data Sheet

## ONYX® INSECTICIDE

SDS #: 6206-1-A  
Revision Date: 2011-04-15  
Version 2



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

<b>Product name</b>	ONYX® INSECTICIDE
<b>Formula code</b>	6206
<b>Active Ingredient(s)</b>	Bifenthrin
<b>Alternate Commercial Name</b>	Biflex SFR
<b>Synonyms</b>	FMC 54800; (2-methyl[1,1'-biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: 2-methylbiphenyl-3-ylmethyl (Z)-(1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate.
<b>Chemical Family</b>	Pyrethroid Pesticide
<b>Manufacturer</b>	<b>Emergency telephone number</b>
FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	For leak, fire, spill or accident emergencies, call: (800) 424-9300 (CHEMTREC - U.S.A.) (703) 527-3887 (CHEMTREC - Collect - All Other Countries), Medical Emergencies: (800) 331-3148 (U.S.A. & Canada) (651) 632-6793 (All Other Countries - Collect)

### 2. Hazards identification

<b>Appearance</b>	amber liquid
<b>Physical State</b>	Liquid
<b>Odor</b>	hydrocarbon-like
<b>Physical or Chemical Hazards</b>	.
<b>Flammable properties</b>	Combustible Liquid
<b>Potential health effects</b>	
<b>Principle Routes of Exposure</b>	Skin contact, Eye contact, Inhalation. Ingestion.
<b>Acute effects</b>	
<b>Eyes</b>	Irritating to eyes.
<b>Skin</b>	Irritating to skin. Prolonged or repeated contact may dry skin and cause irritation.
<b>Inhalation</b>	May cause irritation of respiratory tract. May cause drowsiness and dizziness.
<b>Ingestion</b>	Toxic if swallowed. May cause central nervous system depression. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Potential for aspiration if swallowed.

**Chronic effects** Effects are expected to be similar to those that are seen with acute toxicity. Chronic exposure to aromatic hydrocarbons may cause headaches, dizziness, loss of sensations or feelings (such as numbness), and liver and kidney damage.

**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 %
1,1'-Biphenyl, bis(1-methylethyl)-	69009-90-1	30-40
Bifenthrin	82657-04-3	23.34
Petroleum distillates, hydrotreated light	64742-47-8	10-20
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** Immediately call a poison control center or doctor. 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** Contains petroleum distillate. Vomiting may cause aspiration pneumonia. 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

**Flammable properties** Combustible Liquid

**Flash Point** 67 °C / 153-158 °F

**Special hazards arising from the substance or mixture**

**Sensitivity to Mechanical Impact** not applicable  
**Sensitivity to Static Discharge** not applicable

**Extinguishing media**

**Suitable extinguishing media** Use CO2, dry chemical, or foam.

**Hazardous combustion products** Toxic fumes may be produced.

**Advice for fire-fighters**

**Protective equipment and precautions for firefighters** As in any fire, wear self-contained breathing apparatus and full protective gear.

**NFPA**

<b>Health Hazard</b>	1
<b>Flammability</b>	1
<b>Stability</b>	0
<b>Special Hazards</b>	-

**6. Accidental release measures**

<b>Personal precautions</b>	Isolate and post spill area. Remove all sources of ignition. Ventilate the area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
<b>Environmental precautions</b>	Keep people and animals away from and upwind of spill/leak, Keep material out of lakes, streams, ponds, and sewer drains
<b>Methods for containment</b>	Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
<b>Methods for cleaning up</b>	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.
<b>Other Information</b>	For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

**7. Handling and storage**

<b>Handling</b>	Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.
<b>Storage</b>	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**

Exposure guidelines

Chemical Name	British Columbia	Quebec	Ontario TWAEV	Alberta
Petroleum distillates, hydrotreated light 64742-47-8	TWA: 200 mg/m <sup>3</sup> Skin			

Occupational exposure controls

<b>Engineering measures</b>	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.
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Personal protective equipment

<b>General Information</b>	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
<b>Respiratory protection</b>	For dust, splash, mist or spray exposures wear a filtering mask.
<b>Eye/face protection</b>	For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield.
<b>Skin and body protection</b>	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** hydrocarbon-like  
**pH** No information available 3.9  
**Melting Point/Range** No information available  
**Freezing point** No information available  
**Boiling Point/Range** not applicable  
**Flash Point** 67 - 70 °C / 153-158 °F  
**Evaporation rate** not applicable  
**Autoignition Temperature** not applicable  
**Flammable properties** Combustible Liquid  
**Vapor pressure** not applicable  
**Vapor density** No information available  
**Density** 8.59 lb/gal  
**Specific Gravity** 1.031 @ 20 °C  
**Bulk density** No information available  
**Water solubility** Emulsifies  
**Percent volatile** No information available  
**Partition coefficient:** not applicable  
**Viscosity** No information available  
**Oxidizing properties** not applicable

**10. Stability and reactivity**

**Stability** Stable  
**Conditions to avoid** Heat, flames and sparks  
**Hazardous decomposition products** May emit toxic fumes under fire conditions. Carbon oxides, Hydrogen chloride, Hydrogen fluoride  
**Hazardous polymerization** Hazardous polymerization does not occur.

**11. Toxicological information**

**Eye contact** Moderately irritating to the eyes (rabbit).  
**Skin contact** Irritating to skin (rabbit).  
**Ingestion** Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge. Vomiting after ingestion of this product may cause aspiration of aromatic hydrocarbons into the lungs, which may result in fatal pulmonary edema.  
**Inhalation** Inhalation of hydrocarbon vapors may cause headaches, dizziness, disturbances in vision, drowsiness, respiratory irritation, anesthesia, unconsciousness, and other central nervous system effects.  
**LD50 Dermal** > 2,000 mg/kg (rabbit)  
**LD50 Oral** 153 mg/kg (rat)

**Sensitization** Non-sensitizing

**Chronic Toxicity - Active Ingredient(s)**

**Chronic Toxicity** Effects are expected to be similar to those that are seen with acute toxicity. Chronic exposure to aromatic hydrocarbons may cause headaches, dizziness, loss of sensations or feelings (such as numbness), and liver and kidney damage.

**Carcinogenicity** Bifenthrin: Did not show carcinogenic effects in animal experiments.

**Mutagenicity** Bifenthrin: Not genotoxic.

**Reproductive toxicity** Bifenthrin: No toxicity to reproduction.

**Neurological Effects** Tremors were associated with chronic exposure of laboratory animals to bifenthrin, which may disappear with continued exposure.

**Developmental Toxicity** Bifenthrin: Not teratogenic in animal studies

**Target Organ Effects** Bifenthrin: A slight increase in male mouse urinary bladder tumors at the highest dose was probably not of toxicological concern.

**12. Ecological information**

**Ecotoxicity**

**Bifenthrin (82657-04-3)**

Active Ingredient	Duration	Species	Value	Units
Bifenthrin	EC50	Aquatic organisms	0.11 - 0.57	µg/L
Bifenthrin	96 h LC50	Fish	0.1 - 2.0	µg/L
Bifenthrin	LD50 Oral	Bobwhite quail	>1800	mg/kg
Bifenthrin	LD50 Oral	Mallard duck	>2150	mg/kg
Bifenthrin	LD50	Bee	0.1	µg/bee

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Petroleum distillates, hydrotreated light		LC50= 45 mg/L Pimephales promelas 96 h LC50= 2.2 mg/L Lepomis macrochirus 96 h LC50= 2.4 mg/L Oncorhynchus mykiss 96 h		LC50 = 4720 mg/L 96 h

**Environmental Fate**

**Bifenthrin (82657-04-3)**

Active Ingredient	Type of Test	Result
Bifenthrin	Bioconcentration factor (BCF)	1709
Bifenthrin	Half-life in soil	~85 days
Bifenthrin	log Pow	6.6
Bifenthrin	Mobility in soil	Not expected to reach groundwater
Bifenthrin	Stability in water	Stable to hydrolysis over a wide range of pH values.

Persistence and degradability Inherently biodegradable.

### 13. Disposal considerations

**Waste disposal methods** Pesticide wastes are toxic. 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**

**Packaging Type** 4 x 1 quart, 4 x 4 x 1 quart  
**Proper shipping name** Consumer commodity  
**Hazard class** ORM-D

**Packaging Type** Non-Bulk  
**Proper shipping name** Pyrethroid pesticide, liquid, toxic  
**Hazard Class** 6.1  
**UN/ID No** UN3352  
**Packing group** III

**TDG**

**Proper shipping name** Pyrethroid pesticide, liquid, toxic  
**Hazard Class** 6.1  
**UN/ID No** UN3352  
**Packing group** III  
**Marine pollutant** Bifenthrin.

**ICAO/IATA**

**UN/ID No** UN3352  
**Proper shipping name** Pyrethroid pesticide, liquid, toxic  
**Hazard Class** 6.1  
**Packing group** III  
**Marine pollutant** Bifenthrin  
**Limited quantity** 611 / 60L

**IMDG/IMO**

**Proper shipping name** Pyrethroid pesticide, liquid, toxic  
**Hazard Class** 6.1  
**UN/ID No** UN3352  
**Packing group** III  
**Marine pollutant** Bifenthrin

### 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 %
Bifenthrin	82657-04-3	23.34	1.0

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	yes
<b>Chronic Health Hazard</b>	yes
<b>Fire Hazard</b>	yes
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	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.

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping
Petroleum distillates, hydrotreated light	Partially exempt chemical substance termed Petroleum Process Stream

Chemical Name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
1,1'-Biphenyl, bis(1-methylethyl)-	06/28/1984

**International Regulations**

Mexico - Grade

No information available

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**

- B3 Combustible liquid
- D1B Toxic materials
- D2B Toxic materials



**16. Other information**

**Revision Date:** 2011-04-15  
**Reason for revision:** (M)SDS sections updated.

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**End of Material Safety Data Sheet**