

Material Safety Data Sheet

CAPTURE® 2 EC INSECTICIDE/MITICIDE

MSDS #: 6196-A
Revision Date: 2014-05-08
Version 1.02



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 And Canadian Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	CAPTURE® 2 EC INSECTICIDE/MITICIDE
Formula code	0777; 6196
Active Ingredient(s)	Bifenthrin
Alternate Commercial Name	Capture 240 EC Insecticide
Synonyms	BIFENTHRIN: (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.
<u>Manufacturer</u>	<u>Emergency telephone number</u>
FMC Corporation Agricultural Solutions 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	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

<u>Appearance</u>	Amber liquid
<u>Physical state</u>	Liquid
<u>Odor</u>	Aromatic hydrocarbon
<u>Physical or Chemical Hazards</u>	Keep away from heat, sparks, and open flame.
Flammable properties	Combustible liquid
<u>Potential health effects</u>	
Principle Routes of Exposure	Eye contact, Skin contact, Inhalation, Ingestion.
Acute effects	
Eyes	May cause slight irritation.
Skin	May cause sensitization by skin contact.
Inhalation	Toxic by inhalation. May cause drowsiness and dizziness. May cause irritation of respiratory tract.
Ingestion	Toxic if swallowed. Potential for aspiration if swallowed. Ingestion may cause gastrointestinal discomfort including nausea, vomiting and diarrhea if large amounts are ingested. May cause drowsiness and dizziness.

Chronic effects

Bifenthrin: Long-term exposure caused neurotoxicity (tremors and impaired gait) in the early exposure in animal studies, but tremors disappeared with continued exposure.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients

Chemical Name	CAS-No	Weight %
hydrotreated light paraffinic oil	64742-55-8	30-40
Naphtha (petroleum), heavy aromatic	64742-94-5	30-40
Bifenthrin	82657-04-3	25.1

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 treatment advice.

Inhalation

Move person to fresh air. If person is not breathing, call 911 (within the U.S. and Canada) 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 induce vomiting or 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 Method

42 °C / 108 °F
Closed cup

**Sensitivity to Mechanical Impact
Sensitivity to Static Discharge**

Not applicable
Not applicable

Suitable extinguishing media

Foam. Carbon dioxide (CO₂). Dry chemical. Water spray or fog.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate downwind.

NFPA

Health Hazard	2
Flammability	2
Stability	0
Special Hazards	-

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Isolate and post spill area. 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 cleaning up	Sweep up and shovel into suitable containers for disposal. 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 CONTROL / 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.
<u>Occupational exposure controls</u>	
Engineering measures	Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
<u>Personal Protective Equipment</u>	
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 full-face elastomeric half mask respirator with appropriate cartridges and/or filters, which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization).
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

Information on basic physical and chemical properties

Appearance	Amber liquid
Color	amber

Physical state	Liquid
Odor	Aromatic hydrocarbon
pH	No information available.
Melting Point/Range	No information available.
Freezing point	No information available
Boiling Point/Range	Not applicable
Flash Point	42 °C / 108 °F Closed cup
Evaporation rate	Not applicable
Flammable properties	Combustible liquid
Vapor pressure	No information available
Vapor density	No information available
Density	7.8 - 8.0 lb/gal. (940 - 960 g/L)
Specific Gravity	0.94 - 0.96 @ 20 °C
Water solubility	Emulsifies
Percent volatile	No information available
Partition coefficient	Not applicable
Viscosity	No information available

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Conditions to avoid	Heat, flames and sparks
Hazardous decomposition products	Carbon oxides. Hydrogen chloride. Hydrogen fluoride.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute effects

Eye contact	Mild Irritant (rabbit)
Skin contact	Non-irritating during normal use (rabbit)
Ingestion	Vomiting after ingestion of this product may cause aspiration of aromatic hydrocarbons into the lungs, which may result in fatal pulmonary edema. Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.
Inhalation	Inhalation of aromatic hydrocarbon vapors may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation.
LD50 Dermal	> 2,000 mg/kg (rabbit)
LD50 Oral	262 mg/kg (Rat)
LC50 Inhalation	1.86 mg/L 4 hr (Rat)
Sensitization	This product produces skin sensitization (allergic reaction) in laboratory animals, and may produce similar effects in humans.

Chronic effects

Chronic Toxicity	Bifenthrin: Long-term exposure caused neurotoxicity (tremors and impaired gait) in the early exposure in animal studies, but tremors disappeared with continued exposure.
Carcinogenicity	Bifenthrin: Weak treatment-related response for liver adenocarcinomas and benign bladder tumors (lesion) in male mice
Mutagenicity	Bifenthrin: Not genotoxic in animal studies
Reproductive toxicity	Bifenthrin: No toxicity to reproduction in animal studies
Neurological Effects	Bifenthrin: Causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure

Developmental Toxicity Bifenthrin: Not teratogenic in animal studies.

Target Organ Effects Bifenthrin: Central nervous system (CNS).

Chemical Name	ACGIH	IARC	NTP	OSHA	NIOSH - Target Organs
hydrotreated light paraffinic oil	A2			X	

ACGIH: (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

OSHA: (Occupational Safety & Health Administration)

X - Present

12. ECOLOGICAL INFORMATION

Ecotoxicity

Bifenthrin (82657-04-3)				
Active Ingredient(s)	Duration	Species	Value	Units
Bifenthrin	96 h LC50	Fish	0.1	µg/L
	72 h EC50	Algae	0.822	mg/L
	48 h EC50	Crustacea	0.11	µg/L
	21 d NOEC	Fish	0.012	µg/L
	21 d NOEC	Crustacea	0.0013	µg/L

Environmental Fate

Persistence and degradability Moderately persistent. Does not readily hydrolyze. Not readily biodegradable.

Bioaccumulation The substance has a potential for bioconcentration.

Mobility Immobile. Not expected to reach groundwater.

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.

US EPA Waste Number D001

14. TRANSPORT INFORMATION

DOT

Packaging Type Bulk, Non-Bulk
UN/ID No UN3351
Hazard Class 6.1
Subsidiary Class 3
Packing group III
Description UN3351, Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin, aromatic hydrocarbons), 6.1 (3), PG III

TDG

UN/ID No	UN3351
Hazard Class	6.1
Subsidiary Class	3
Packing group	III
Marine pollutant	Bifenthrin.
Description	UN3351, Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin, aromatic hydrocarbons), 6.1 (3), PG III

ICAO/IATA

UN/ID No	UN3351
Hazard Class	6.1
Subsidiary hazard class	3
Packing group	III
Marine pollutant	Bifenthrin
Description	UN3351, Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin, aromatic hydrocarbons), 6.1 (3), PG III
Limited quantity	2 L

IMDG/IMO

UN/ID No	UN3351
Hazard Class	6.1
Subsidiary hazard class	3
Packing group	III
EmS No.	F-E, S-D
Marine pollutant	Bifenthrin
Description	UN3351, Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin, aromatic hydrocarbons), 6.1 (3), PG III (42°C c.c.)

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	24	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	yes
Fire Hazard	yes
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**

No known effect based on information supplied.

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: 2014-05-08
Reason for revision: (M)SDS sections updated.

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End of Material Safety Data Sheet