

# MATERIAL SAFETY DATA SHEET

## CAPTURE® 1.15 G INSECTICIDE



MSDS Ref. No: 82657-04-3-82

Version: Global

Date Approved: 09/10/2001

Revision No: 2

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200; the EC directive, 91/155/EEC and other regulatory requirements. The information contained herein is for the concentrate as packaged, unless otherwise noted.

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** CAPTURE® 1.15 G INSECTICIDE**PRODUCT CODE:** 6102**ACTIVE INGREDIENT:** Bifenthrin**CHEMICAL FAMILY:** Pyrethroid Pesticide**MOLECULAR FORMULA:** C<sub>23</sub>H<sub>22</sub>ClF<sub>3</sub>O<sub>2</sub> (bifenthrin)

**SYNONYMS:** 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

### MANUFACTURER

FMC CORPORATION  
Agricultural Products Group  
1735 Market Street  
Philadelphia, PA 19103 USA

### Emergency Telephone Numbers:

**Emergency Phone (FMC)** 800-331-3148 (U.S.A. & Canada)

**Emergency Phone (FMC)** 716-735-3765 (Reverse charges)

**CHEMTREC (U.S.):** (800) 424-9300 (U.S.A. & Canada)

(202) 483-7616 (All other countries)

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS#</u>	<u>Wt.%</u>	<u>PEL/TLV</u>	<u>EC No.</u>	<u>EC Class</u>
Bifenthrin	82657-04-3	1.15	None	None	R25; R50/53
Silica, quartz	14808-60-7	0 - 19.5	0.1 mg/m <sup>3</sup> (respirable) 0.05 mg/m <sup>3</sup>	None	None

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**IMMEDIATE CONCERNS:**

- Grey to tan free-flowing granules with a faint, slightly sweet odor.
- Slightly combustible. May support combustion at elevated temperatures.
- 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.

**POTENTIAL HEALTH EFFECTS:** Effects of overexposure result from either swallowing, coming into contact with the skin or eyes, and from inhaling the dust. Symptoms of overexposure include bleeding from the nose, tremors, and convulsions. Contact with bifenthrin may occasionally produce skin sensations such as numbing, burning and tingling. These sensations are reversible and usually subside within 12 hours.

**MEDICAL CONDITIONS AGGRAVATED:** None presently known.

---

### 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:** Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

**INHALATION:** Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

**NOTES TO MEDICAL DOCTOR:** This product has low oral, dermal and inhalation toxicity. It is minimally irritating to the eyes and non-irritating to the skin. This product contains a granular material (clay) that may cause mechanical irritation to the eyes. Contains petroleum distillates that can produce a severe pneumonitis or fatal pulmonary edema if aspirated during vomiting. Consideration should be given to gastric lavage with an endotracheal tube in place. 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. This material may support combustion at elevated temperatures.

**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.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen flouride.

---

## 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 spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e., methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

---

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** 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

**ENGINEERING CONTROLS:** 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 exposure 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).

**WORK HYGIENIC PRACTICES:** Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

### 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.

**COMMENTS:** Personal protective recommendations for mixing or applying this product are prescribed on the product label.

Information stated above provides useful, additional guidance for individuals whose use or handling of this product is not guided by the product label.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**ODOR:** Faint, slightly sweet

**APPEARANCE:** Grey to tan, free-flowing granules

**DENSITY:** (Bulk) 35 lbs/cu ft. (loose); 40 lbs/cu ft. (tapped)

**MOLECULAR WEIGHT:** 422.88 (bifenthrin)

**WEIGHT PER VOLUME:** 560 - 640 g/L

---

## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Excessive heat and fire.

**STABILITY:** Stable

**POLYMERIZATION:** Will not occur

---

## 11. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Minimally irritating (rabbit)

**SKIN EFFECTS:** Non-irritating (rabbit)

**DERMAL LD<sub>50</sub>:** >5000 mg/kg (rabbit)

**ORAL LD<sub>50</sub>:** 7431 mg/kg (rat)

**INHALATION LC<sub>50</sub>:** >5.73 mg/L/4 hr (rat)

**SENSITIZATION:** This product is not a skin sensitizer.

**ACUTE EFFECTS FROM OVEREXPOSURE:** This product has low oral, dermal and inhalation toxicity. It is minimally irritating to the eyes and non-irritating to the skin. Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge. Bifenthrin does not cause acute delayed neurotoxicity. Experience to date indicates that contact with bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours. Inhalation of petroleum distillate vapors may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation. Vomiting after ingestion of this product may cause aspiration of petroleum distillates into the lungs which may result in fatal pulmonary edema.

**CHRONIC EFFECTS FROM OVEREXPOSURE:** No data available for the formulation. In studies with

laboratory animals, bifenthrin did not cause reproductive toxicity or teratogenicity. Tremors were associated with repeated exposure of laboratory animals to bifenthrin. In lifetime feeding studies conducted with rodents, a slight increase in the incidence of urinary bladder tumors at the highest dose in male mice was considered to be an equivocal response, not evidence of a clear compound-related effect. The overall absence of genotoxicity has been demonstrated in mutagenicity tests with bifenthrin. Chronic exposure to petroleum distillates may cause headaches, dizziness, loss of sensations or feelings (such as numbness), and liver and kidney damage. 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 a "limited" carcinogen to humans (Group 2A). NTP has classified respirable crystalline silica (quartz, cristobalite and tridymite) as "reasonably anticipated to be carcinogenic".

<u>Chemical Name</u>	<u>NTP Status</u>	<u>IARC Status</u>	<u>OSHA Status</u>	<u>Other</u>
Silica, quartz	Anticipated	Listed	Not listed	Not listed (ACGIH)

## 12. ECOLOGICAL INFORMATION

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

**ENVIRONMENTAL DATA:** Bifenthrin has moderate stability in the soil under aerobic conditions (half-life range from 65 - 125 days depending on soil type) and is stable at a wide range of pH values. Bifenthrin has a high Log Pow (>6.0), a high affinity for organic matter, and is not mobile in soil. Therefore, there is little potential for movement into ground water. There is the potential for bifenthrin to bioconcentrate (BCF = 11,750).

**ECOTOXICOLOGICAL INFORMATION:** Bifenthrin is highly toxic to fish and aquatic arthropods and LC50 values range from 0.0038 to 17.8 µg/L. In general, the aquatic arthropods are the most sensitive species. Care should be taken to avoid contamination of the aquatic environment. Bifenthrin had no effect on mollusks at its limit of water solubility. Bifenthrin is only slightly toxic to both water fowl and upland game birds (LD50 values range from 1,800 mg/kg to >2,150 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:** Completely empty package into application equipment. Then dispose of empty package in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

## 14. TRANSPORT INFORMATION

### SPECIAL SHIPPING NOTES:

NON-BULK FREIGHT CLASSIFICATION:  
Insecticides, NOI, Other than toxic. NMFC Item 102120.

NOTES:

Material is not subject to the hazardous materials regulations when in non-bulk packages.

---

## 15. REGULATORY INFORMATION

### UNITED STATES

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):** 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. This product contains the following ingredients with a TPQ of less than 10,000 lbs.: None

**SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):** This product contains the following ingredients subject to Section 313 reporting requirements: (bifenthrin)

#### CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)

**CERCLA REGULATORY (40 CFR 302.4):** Not listed

**COMMENTS:** Australian Hazard Code : 3XE

U.S. EPA Signal Word : WARNING

---

## 16. OTHER INFORMATION

### REVISION SUMMARY

This MSDS replaces Revision #1, dated April 10, 2001. Changes in information are as follows:

Section 2 (Composition / Information on Ingredients)

Capture and FMC Logo - FMC Trademarks

© 2001 FMC Corporation. All Rights Reserved