

SAFETY DATA SHEET
Capture® 2 EC-CAL Insecticide/Miticide

SDS #: 1370-A
Revision date: 2015-04-17
Format: NA
Version 1.01



1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Capture® 2 EC-CAL Insecticide/Miticide

Other means of identification

Product Code(s) 1370-A

Synonyms BIFENTHRIN: (2-methyl[1,1'-biphenyl]-3-yl)methyl
3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate (CAS name);
2-methylbiphenyl-3-ylmethyl
(Z)-(1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate
(IUPAC name)

Active Ingredient(s) Bifenthrin

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
1735 Market Street
Philadelphia, PA 19103
(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)

| | |
|---|-------------|
| Acute toxicity - Oral | Category 3 |
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4 |
| Skin sensitization | Category 1B |

| | |
|--|------------|
| Carcinogenicity | Category 2 |
| Specific target organ toxicity (single exposure) | Category 1 |
| Specific target organ toxicity (repeated exposure) | Category 1 |
| Aspiration toxicity | Category 1 |
| Flammable liquids | Category 3 |


GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Danger

Hazard Statements
 H301 - Toxic if swallowed
 H304 - May be fatal if swallowed and enters airways
 H317 - May cause an allergic skin reaction
 H332 - Harmful if inhaled
 H351 - Suspected of causing cancer
 H370 - Causes damage to organs
 H372 - Causes damage to organs through prolonged or repeated exposure

Physical Hazards
 H226 - Flammable liquid and vapor



Precautionary Statements - Prevention

- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
- P233 - Keep container tightly closed
- P240 - Ground/bond container and receiving equipment
- P241 - Use explosion-proof electrical/ ventilating / lighting equipment
- P242 - Use only non-sparking tools
- P243 - Take precautionary measures against static discharge
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P271 - Use only outdoors or in a well-ventilated area
- P272 - Contaminated work clothing should not be allowed out of the workplace
- P280 - Wear protective gloves

Precautionary Statements - Response

- P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
- P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
- P363 - Wash contaminated clothing before reuse
- 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 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
- P330 - Rinse mouth
- P331 - Do NOT induce vomiting
- P370 + P378 - In case of fire: Use Foam. Carbon dioxide (CO2). Dry chemical. Water spray or fog. for extinction

Precautionary Statements - Storage

- P405 - Store locked up
- P403 + P235 - Store in a well-ventilated place. Keep cool

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

Chemical Family Pyrethroid Pesticide.

| Chemical name | CAS-No | Weight % |
|---|------------|----------|
| Bifenthrin | 82657-04-3 | 26.6 |
| Naphtha (petroleum), heavy aromatic | 64742-94-5 | 30-40 |
| Petroleum distillates, solvent dewaxed light paraffinic | 64742-56-9 | 20-30 |
| Pseudocumene | 95-63-6 | 10-15 |
| Petroleum distillates, solvent dewaxed heavy paraffinic | 64742-65-0 | <10 |

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 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 | 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. |
| Most important symptoms and effects, both acute and delayed | Central nervous system effects. |
| Indication of immediate medical attention and special treatment needed, if necessary | 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

| | |
|---|--|
| Suitable Extinguishing Media | Foam. Carbon dioxide (CO ₂). Dry chemical. Soft stream or water fog only if necessary. |
| Specific Hazards Arising from the Chemical | None known. |
| Explosion data | |
| Sensitivity to Mechanical Impact | Not sensitive. |
| Sensitivity to Static Discharge | Not sensitive. |

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

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.

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.

Methods for cleaning up Absorb with earth, sand or other non-combustible material and transfer to containers for later 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.

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

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH | Mexico |
|-------------------------|-----------|----------|---|--------|
| Pseudocumene 95-63-6 | - | - | TWA: 25 ppm TWA: 125 mg/m ³ | - |

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 For dust, splash, mist or spray exposure, wear chemical protective goggles.

Skin and Body Protection Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection Protective gloves

Respiratory Protection For dust, splash, mist or spray exposures wear a filtering mask.

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

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

| | |
|-------------------------------------|--|
| Appearance | Amber, Liquid |
| Physical State | Liquid |
| Color | Amber |
| Odor | Aromatic hydrocarbon |
| Odor threshold | No information available |
| pH | No information available |
| Melting point/freezing point | Not applicable |
| Boiling Point/Range | No information available |
| Flash point | 44 - 46 °C / 111.2 - 114.8 °F Closed cup |
| Evaporation Rate | No information available |
| Flammability (solid, gas) | No information available |
| Flammability Limit in Air | |
| Upper flammability limit: | No information available |
| Lower flammability limit: | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Density | 7.91 lb/gal |
| Specific gravity | 0.95 @ 20 °C |
| Water solubility | Emulsifies |
| Solubility in other solvents | No information available |
| Partition coefficient | No information available |
| Autoignition temperature | No information available |
| Decomposition temperature | No information available |
| Viscosity, kinematic | No information available |
| Viscosity, dynamic | No information available |
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Molecular weight | No information available |
| Bulk density | No information available |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Reactivity | None under normal use conditions. |
| 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 | Carbon oxides (COx), Hydrogen chloride, Hydrogen fluoride. |

11. TOXICOLOGICAL INFORMATION**Product Information**

| | |
|--|---|
| LD50 Oral | 262 mg/kg (rat) |
| LD50 Dermal | > 2,000 mg/kg (rabbit) |
| LC50 Inhalation | 1.86 mg/L 4 hr (rat) |
| Serious eye damage/eye irritation | Minimally irritating (rabbit). |
| Skin corrosion/irritation | Non-irritating. |
| Sensitization | This product produces skin sensitization (allergic reaction) in laboratory animals, and may produce similar effects in humans |

Information on toxicological effects

Symptoms Large doses of bifenthrin ingested by laboratory animals produced signs of toxicity including convulsions, tremors and bloody nasal discharge.

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

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.

Mutagenicity Bifenthrin: Not genotoxic in laboratory studies.

Carcinogenicity Bifenthrin: Weak treatment-related response for liver adenocarcinomas and benign bladder tumors (lesion) in male mice.

Neurological effects Bifenthrin: Causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure.

Reproductive toxicity Bifenthrin: No toxicity to reproduction in animal studies.

Developmental toxicity Bifenthrin: Not teratogenic in animal studies.

STOT - single exposure Causes damage to organs: See listed target organs below.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure: See listed target organs below.

Target organ effects Central Nervous System.

Neurological effects Bifenthrin: Causes clinical signs of neurotoxicity (tremors, impaired gait, excessive salivation) following acute or subchronic exposure. Tremors disappeared with continued exposure.

Aspiration hazard Potential for aspiration if swallowed.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---|-------|------|-----|------|
| Petroleum distillates, solvent dewaxed light paraffinic 64742-56-9 | A2 | | | |
| Petroleum distillates, solvent dewaxed heavy paraffinic 64742-65-0 | A2 | | | |

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 |

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

Bioaccumulation Bifenthrin: The substance has a potential for bioconcentration.

Mobility Bifenthrin: 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

UN/ID no UN3351
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic, flammable
 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
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic, flammable
 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, Marine Pollutant

ICAO/IATA

UN/ID no UN3351
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic, flammable
 Hazard class 6.1
 Subsidiary Hazard Class 3
 Packing Group III
 Description UN3351, Pyrethroid pesticide, liquid, toxic, flammable (Bifenthrin, aromatic hydrocarbons), 6.1 (3), PG III

IMDG/IMO

UN/ID no UN3351
 Proper Shipping Name Pyrethroid pesticide, liquid, toxic, flammable
 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.), 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 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 | 82657-04-3 | 26.6 | 1.0 |
| Pseudocumene - 95-63-6 | 95-63-6 | 10-15 | 1.0 |

SARA 311/312 Hazard Categories

Acute health hazard Yes
 Chronic health hazard Yes
 Fire hazard Yes
 Sudden release of pressure hazard No

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Reactive Hazard

No

Clean Water Act

This product contains the following substances which are regulated 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:

WARNING

*May be fatal if swallowed. Causes moderate eye irritation.
This pesticide is extremely toxic to fish and aquatic invertebrates.*

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

| Chemical name | California Prop. 65 |
|------------------|---------------------|
| Cumene - 98-82-8 | Carcinogen |

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

International Inventories

| Component | TSCA (United States) | DSL (Canada) | EINECS/ELI NCS (Europe) | ENCS (Japan) | China (IECSC) | KECL (Korea) | PICCS (Philippines) | AICS (Australia) |
|---|----------------------|--------------|-------------------------|--------------|---------------|--------------|---------------------|------------------|
| Bifenthrin 82657-04-3 (26.6) | | | | X | X | X | | |
| Naphtha (petroleum), heavy aromatic 64742-94-5 (30-40) | X | X | X | X | X | X | X | X |
| Petroleum distillates, solvent dewaxed light paraffinic 64742-56-9 (20-30) | X | X | X | X | X | X | X | X |
| Pseudocumene 95-63-6 (10-15) | X | X | X | X | X | X | X | X |
| Petroleum distillates, solvent dewaxed heavy paraffinic 64742-65-0 (<10) | X | X | X | X | X | X | X | X |

Mexico - Grade

Moderate risk, Grade 2

WHMIS Hazard Class B3 - Combustible liquid
 D1B - Toxic materials
 D2A - Very toxic materials



16. OTHER INFORMATION

| | | | | |
|-------------|--------------------------|-----------------------|--------------------------|------------------------------|
| NFPA | Health Hazards 2 | Flammability 2 | Instability 0 | Special Hazards - |
| HMIS | Health Hazards 2* | Flammability 2 | Physical hazard 0 | Personal Protection X |

*Indicates a chronic health hazard.

Revision date: 2015-04-17
Revision note: (M)SDS sections updated

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End of Safety Data Sheet