

# Material Safety Data Sheet

## TALSTAR® INSECTICIDE

SDS # : 6691  
Revision Date: 2011-02-18  
Version 1



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>  | TALSTAR® INSECTICIDE   |
| <b>Active Ingredient(s)</b>  | Bifenthrin   |
| <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>Recommended use</b>   | Insecticide  |
| <b>Manufacturer</b><br>FMC Corporation<br>Agricultural Products Group<br>1735 Market Street<br>Philadelphia, PA 19103<br>General Information:<br>Phone: (215) 299-6000<br>E-Mail: msdsinfo@fmc.com | <b>Emergency telephone number</b><br><br>For leak, fire, spill or accident emergencies, call:<br>(800) 424-9300 (CHEMTREC - U.S.A.)<br>(703) 527-3887 (CHEMTREC - Collect - All Other Countries)<br>Medical Emergencies:<br>(800) 331-3148 (U.S.A. & Canada)<br>(651) 632-6793 (All Other Countries - Collect) |

### 2. Hazards identification

|                                      |   |
|--------------------------------------|---|
| <b>Appearance</b>                    | Aerosolized liquid  |
| <b>Physical State</b>                | No information available  |
| <b>Odor</b>                          | odorless  |
| <b>Physical hazards</b>              | Non-flammable aerosol.  |
| <b>Potential health effects</b>      |   |
| <b>Principle Routes of Exposure</b>  | Skin contact, Eye contact, Inhalation.  |
| <b>Acute effects</b>                 |   |
| <b>Eyes</b>                          | May cause irritation.   |
| <b>Skin</b>                          | Non-irritating during normal use. Prolonged or repeated contact may dry skin and cause irritation.                                  |
| <b>Inhalation</b>                    | May cause irritation of respiratory tract.  |
| <b>Ingestion</b>                     | Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| <b>Chronic effects</b>               |   |
| <b>Aggravated Medical Conditions</b> | Asthma.   |

### 3. Composition/information on ingredients

#### Hazardous ingredients

| Chemical Name                             | CAS-No     | Weight % |
|---|------------|----------|
| Dimethyl ether                            | 115-10-6   | 10-20    |
| Petroleum distillates, hydrotreated light | 64742-47-8 | 1-5      |
| Bifenthrin                                | 82657-04-3 | 0.053    |
| Prallethrin                               | 23031-36-9 | 0.03     |

### 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          | Call a poison control center or doctor immediately for treatment advice. Have a 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. |
| Notes to physician | 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** Non-flammable aerosol.

**Flash Point** Does not flash

**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.

**Specific hazards arising from the chemical** Closed containers may rupture violently under fire conditions.

#### Advice for fire-fighters

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

#### NFPA

**Health Hazard** 1

|                 |   |
|-----------------|---|
| Flammability    | 1 |
| Stability       | 0 |
| Special Hazards | - |

## 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. If ventilation is not possible wear full protection suit and chemical protective equipment.  |
| <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 cleaning up</b>   | Transfer damaged cartridges or cans to containers for later disposal. Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13. Rinsate may be disposed at a waste water treatment plant. |
| <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 |
|--|------------------------------------|--------|---------------|---------|
| Dimethyl ether<br>115-10-6                                 | TWA: 1000 ppm                      |        |               |         |
| Petroleum distillates,<br>hydrotreated light<br>64742-47-8 | TWA: 200 mg/m <sup>3</sup><br>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. |
| <b>Personal protective equipment</b> |  |
| <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.   |
| <b>Hand protection</b>               | 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

|                                 |                          |
|---------------------------------|--------------------------|
| <b>Appearance</b>               | Aerosolized liquid       |
| <b>Color</b>                    | clear                    |
| <b>Physical State</b>           | No information available |
| <b>Odor</b>                     | odorless                 |
| <b>pH</b>                       | 6.0-6.6                  |
| <b>Melting Point/Range</b>      | No information available |
| <b>Freezing point</b>           | No information available |
| <b>Boiling Point/Range</b>      | not applicable           |
| <b>Flash Point</b>              | Does not flash           |
| <b>Evaporation rate</b>         | not applicable           |
| <b>Autoignition Temperature</b> | not applicable           |
| <b>Flammable properties</b>     | Non-flammable aerosol.   |
| <b>Vapor pressure</b>           | not applicable           |
| <b>Vapor density</b>            | No information available |
| <b>Density</b>                  | 0.975 g/mL               |
| <b>Specific Gravity</b>         | No information available |
| <b>Bulk density</b>             | No information available |
| <b>Water solubility</b>         | Soluble in water         |
| <b>Percent volatile</b>         | No information available |
| <b>Partition coefficient:</b>   | not applicable           |
| <b>Autoignition Temperature</b> | not applicable           |
| <b>Viscosity</b>                | No information available |
| <b>Oxidizing properties</b>     | not applicable           |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Stability</b>                        | Stable                                      |
| <b>Conditions to avoid</b>              | Heat, flames and sparks                     |
| <b>Hazardous decomposition products</b> | May emit toxic fumes under fire conditions. |
| <b>Hazardous polymerization</b>         | Hazardous polymerization does not occur.    |

## 11. Toxicological information

**Acute toxicity**

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.

|                     |   |
|---------------------|---|
| <b>Eye contact</b>  | Mild Irritant   |
| <b>Skin contact</b> | Mild Irritant   |
| <b>Ingestion</b>    | Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| <b>Inhalation</b>   | May cause irritation of respiratory tract.  |

LD50 Dermal > 5000 mg/kg (rat)  
 LD50 Oral > 5000 mg/kg (rat)  
 LC50 Inhalation: > 5.12 mg/L (rat) (4-hr)

Sensitization Non-sensitizing

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

**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. |

| Chemical Name  | log Pow |
|----------------|---------|
| Dimethyl ether | -0.18   |

**Persistence and degradability** Inherently biodegradable.

**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**

**Packaging Type**                                      Non-Bulk

**DOT**  
**Proper shipping name**                              Consumer Commodity, ORM-D

**TDG**  
**Proper shipping name**                              Aerosols  
**Hazard Class**    2  
**UN/ID No**    UN1950

**ICAO/IATA**  
**UN/ID No**    UN1950  
**Proper shipping name**                              Aerosols, non-flammable  
**Hazard Class**    2

**IMDG/IMO**  
**Proper shipping name**                              Aerosols  
**UN/ID No**    UN1950

**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**

|  |    |
|--|----|
| <b>Acute Health Hazard</b>               | No |
| <b>Chronic Health Hazard</b>             | No |
| <b>Fire Hazard</b>                       | No |
| <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.

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

**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**

not determined

**16. Other information****Revision Date:**

2011-02-18

**Reason for revision:**

No information available

**Disclaimer**

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. **NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN.** The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. Use of this product is regulated by the U.S. Environmental Protection Agency (EPA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Further, since the conditions and methods of use are beyond the control of FMC Corporation, FMC corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

**Prepared By**

FMC Corporation

Talstar and FMC Logo - Trademarks of FMC Corporation

© 2011 FMC Corporation. All Rights Reserved

**End of Material Safety Data Sheet**