

# MATERIAL SAFETY DATA SHEET

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Date of Issue: July 2012  
MSDS No. FMC/TAL250/1

## SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name: TALSTAR® 250 EC INSECTICIDE/MITICIDE**

**Other Names:** Bifenthrin.  
**Use:** Agricultural Insecticide.  
**Company:** FMC Australasia Pty Ltd.  
**Address:** Unit 26, 8 Metroplex Ave, Murarrie Qld 4172  
**Telephone Number:** 07 3908 9212 **Fax Number:** 07 3908 9221  
**Emergency Telephone Number:** 1800 033 111 (All hours - Australia wide).

## SECTION 2 HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.  
Classified as a Dangerous Good according to the ADG Code.**

**Risk phrases:** R20 Harmful by inhalation.  
R22 Harmful if swallowed.  
R65 Harmful: May cause lung damage if swallowed.  
R66 Repeated exposure may cause skin dryness or cracking.

**Safety Phrases:** S2 Keep out of reach of children.  
S13 Keep away from food, drink and animal feeding stuffs.  
S23 Do not breathe vapour or spray.  
S24/25/ Avoid contact with skin and eyes.  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

## SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

### Ingredients:

<b>CHEMICAL</b>	<b>CAS NUMBER</b>	<b>PROPORTION</b>
Bifenthrin	82657-04-3	250 g/L
Liquid Hydrocarbons	64742-94-5	640 g/L
Other ingredients determined not to be hazardous		balance

## SECTION 4 FIRST AID MEASURES

### FIRST AID

**Swallowed:** If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia (13 11 26). If swallowed, do not induce vomiting. Give a glass of water. If any discomfort persists seek medical advice. Prevent vomit from entering the lungs by careful placement of the patient.

**Eye:** If in eyes, hold eyes open and flush with copious amounts of water. If irritation occurs and persists, obtain medical attention.

**Skin:** If on skin wash with plenty of soap and water. Remove contaminated clothing. If irritation occurs and persists see a doctor.

**Inhaled:** Remove patient to fresh air. If breathing discomfort occurs, obtain medical attention.

**SECTION 4 FIRST AID MEASURES (Continued)**

**Advice to Doctors:** Bifenthrin the active ingredient in this product is a pyrethroid insecticide. The formulation also contains petroleum distillates that can cause severe pneumonitis or fatal pulmonary oedema if aspirated. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is otherwise symptomatic and supportive.

**SECTION 5 FIRE FIGHTING MEASURES**

**Specific Hazard:** Talstar 250 EC is a combustible liquid. Flash point > 62°C.

**Extinguishing media:** Foam, CO<sub>2</sub> or dry chemical. Soft stream water fog if no alternatives. Contain all runoff.

**Hazards from combustion products:** On burning will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride etc.

**Precautions for fire-fighters and special protective equipment:** Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

**SECTION 6 ACCIDENTIAL RELEASE MEASURES**

**Emergency procedures:** Isolate and post spill area. Keep out unprotected persons and animals. Wear prescribed protective clothing and equipment. Large spills should be dyked or covered to prevent dispersal. Vacuum shovel or pump spilled material into an approved container and dispose of as listed in section 13.

**Material and methods for containment and cleanup procedures:** To clean spill area, tools and equipment, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

**SECTION 7 HANDLING AND STORAGE**

**Precautions for Safe Handling:** Ensure containers are kept closed until using product. Attacks eyes. Poisonous if swallowed. Harmful if inhaled. Will irritate the skin. Avoid contact with eyes and skin. Do not inhale vapour. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves and goggles. If applying by hand, wear cotton overalls over normal clothing, buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves. If product in eyes wash it out immediately with water. Wash hands after use. After each day's use wash gloves, goggles and contaminated clothing.

**Conditions for Safe Storage:** DO NOT store near (or allow to contact) fertilizers, fungicides or other pesticides. Store in the closed original container, in a cool well ventilated area, out of direct sunlight. Store in a room or place away from children, animals, food, feed stuffs, seed and fertilizers. Do not store near sources of ignition or naked flames.

This product is classified as a Dangerous Good of class 6.1 and should be handled stored and transported in accordance with dangerous goods requirements.

This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to state regulations for storage and transport requirements.

## **SECTION 8 | EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **National Exposure Standards:**

No exposure standard for bifenthrin has been established by Safe Work Australia for this product. However the manufacturer recommends an occupational exposure limit of 100 mg/m<sup>3</sup> (15 ppm) TWA, as total hydrocarbon.

### **Biological Limit Values:**

No biological limit allocated.

### **Engineering controls:**

Use in well ventilated area only. Use local exhaust at all process locations where spray or vapours may be emitted. Ventilate all transport vehicles prior to unloading. Keep containers close when not in use.

### **Personal Protective equipment (PPE):**

Work Clothing: When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves and goggles. If applying by hand, wear cotton overalls over normal clothing, buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves. If product in eyes wash it out immediately with water. Wash hands after use. After each day's use wash gloves, goggles and contaminated clothing.

Eye Protection: When using product, wear chemical protective goggles or face shield.

Respiratory Protection: If inhalation risk exists, wear a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (Australian Standards).

Gloves: Wear chemical protective gloves made PVC when handling this product. Inspect regularly for leaks. Wash the outside of gloves with soap and water prior to removal.

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday.

## **SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear straw to pale yellow coloured liquid
<b>Odour:</b>	Liquid hydrocarbon odour.
<b>Boiling point:</b>	Not available.
<b>Freezing point:</b>	Not available.
<b>Specific Gravity:</b>	0.97 g/mL.
<b>pH:</b>	5.5 - 7.5.
<b>Solubility in Water:</b>	Product emulsifies in water.
<b>Flammability:</b>	Combustible liquid.
<b>Corrosive hazard:</b>	Non corrosive; compatible with stainless steel containers & polyethylene used in spray tanks and parts.
<b>Flashpoint (°C):</b>	> 62°C.
<b>Flammability Limits (%):</b>	Not established.
<b>Poisons Schedule:</b>	Product is a schedule 6 poison.

## **SECTION 10 | STABILITY AND REACTIVITY**

**Chemical Stability:** This product is stable in ambient conditions for a period of at least 2 years.

**Conditions to avoid:** Avoid excessive sources of heat and naked flames.

**Incompatible materials:** Strong oxidising agents.

**Hazardous decomposition products:** When the product is heated to high temperatures, thermal decomposition may generate toxic and noxious fumes, including carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride and hydrogen fluoride.

**Hazardous reactions:** No particular reactions to avoid. Will not polymerise.

## **SECTION 11 | TOXICOLOGICAL INFORMATION**

### **Potential Health Effects:**

This product is poisonous if swallowed and harmful if inhaled. Will irritate the skin. Ingestion of large doses of bifenthrin by laboratory animals produced signs of toxicity which included clonic convulsions, tremors and bloody nasal discharge. Irritating to eyes and respiratory system.

**SECTION 11 TOXICOLOGICAL INFORMATION (Continued)**

This formulation also contains liquid hydrocarbons. Harmful: May cause lung damage if swallowed. Inhalation of liquid hydrocarbon vapours may cause central nervous system depression, dizziness, disturbances in vision and respiratory irritation. Moderately irritating to the eyes. Contact with the skin may be irritating. Dermal sensitisation may occur.

**Acute**

**Swallowed:** This product is poisonous if swallowed; the extrapolated acute oral LD<sub>50</sub> = 250 mg/kg.

**Eye:** Irritating to eyes. Product can be absorbed through the eyes.

**Skin:** This product has a low dermal toxicity. The extrapolated acute dermal LD<sub>50</sub> (rabbit) > 2000 mg/kg. Skin sensitising may occur in sensitive individuals. Skin contact may result in irritation with a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

**Inhaled:** This product is harmful if inhaled. Inhalation of liquid hydrocarbon vapours may cause dizziness, disturbances in vision and irritation to the eyes, skin and mucous membrane of the respiratory and gastrointestinal tracts. The extrapolated acute inhalation LC<sub>50</sub> = 1.65 mg/L/4 hour

**Chronic:** No data available on this formulation. In studies with laboratory animals, Bifenthrin Technical did not cause teratogenicity or reproductive toxicity. Tremors were associated with repeated exposure of dogs, rats, rabbits and mice to Bifenthrin. The overall results from a battery of genotoxicity studies indicate that Bifenthrin is not considered to be genotoxic. Ames test results were negative. Kidney and liver damage is possible from over-exposure to liquid hydrocarbons over long periods. Additionally, some reversible haematopoietic depression has been observed in animals with extended exposure to liquid hydrocarbons.

**SECTION 12 ECOLOGICAL INFORMATION**

**Environmental Toxicology:** The active ingredient, Bifenthrin, is highly toxic to fish and aquatic arthropods with LC<sub>50</sub> values ranging from 0.0038 µg/L 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 molluscs at its limit of water solubility. Bifenthrin is only slightly toxic to both waterfowl and upland game birds (LC<sub>50</sub> values range from 1800 mg/kg to > 2,150 mg/kg. Do not contaminate sewers, drains, dams, creeks or any other waterways with product or the used container.

**Environmental Properties:** The active ingredient, Bifenthrin, degrades at a moderate rate in agricultural soils (t<sub>1/2</sub> = 50 to 205 days), and more rapidly on the surface of bare soils (t<sub>1/2</sub> = 7 to 62 days). Bifenthrin is tightly bound in most soils and has extremely low water solubility.

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Spills & Disposal:** In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated below or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent, bleach or caustic soda) and add the solution to the drums of waste already collected. Label for contents. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities.

Do not cut or weld metal containers. Vapours that form inside the containers may create an explosion hazard.

*Dangerous to Fish:* Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

**SECTION 13 DISPOSAL CONSIDERATIONS(Continued)**

**Disposal of empty, non-returnable containers:** Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If not available bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots, in compliance with relevant Local, State or Territory government regulations. Empty containers and product should not be burnt.

**SECTION 14 TRANSPORT INFORMATION**

**Transport:** Talstar 250 EC is classified as a Dangerous Goods. UN 3352, PYRETHROID PESTICIDE, LIQUID, TOXIC (25% BIFENTHRIN). Class 6.1, Packaging Group III. Product is a C1 combustible liquid for storage purposes.

**SECTION 15 REGULATORY INFORMATION**

Classified as a hazardous substance according to criteria of NOHSC Australia. (Xn). Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP No. 3), this product is a schedule 6 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product registration number 60987

Product is classified as a Dangerous Good according to the ADG Code (7<sup>th</sup> Ed).

Product is classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

**Requirements concerning special training:**

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

**SECTION 16 OTHER INFORMATION**

Issue Date: 12 July 2012 (revised issue). Revision to correct hazard classification.

Key to abbreviations and acronyms used in this MSDS:

ADG Code Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).

Oedema Accumulation of fluid.

Carcinogen: An agent which is responsible for the formation of a cancer.

Clonic: Neuromuscular activity characterized by rapidly alternating muscular contraction and relaxation.

Genotoxic Capable of causing damage to genetic material, such as DNA.

HSIS: Hazardous Substances Information System.

Lacrimation: The production, secretion, and shedding of tears.

Lavage: A general term referring to cleaning or rinsing.

Mutagen: An agent capable of producing a mutation.

NOHSC National Occupational Health and Safety Commission.

Oedema Accumulation of fluid in tissues.

Pneumonitis: A general term that refers to inflammation of lung tissue.

PPE Personal protective equipment.

TWA The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

**SECTION 16 OTHER INFORMATION (Continued)**

## References

1. "Search Hazardous Substances". HSIS - Safe Work Australia website. (2012).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) No. 3.
4. The Australian Code for the Transport of Dangerous Goods by Road & Rail (7th Edition).

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

*End of MSDS*