



Material Safety Data Sheet

This material is hazardous according to criteria of NOHSC.

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

1. Identification of the substance/preparation and of the company/undertaking

Product Name: TALSTAR 100 EC INSECTICIDE/MITICIDE

Synonyms: (R) Talstar is a Registered Trade Mark of FMC Corporation. MSDS No. FMC/TAL100/1

Supplier: FMC (Chemicals) Pty. Limited

ABN: 095 326 891

Street Address: 77 Tingira Street
Pinkenba, Queensland 4008
Australia

Telephone Number: +61 7 3867 9100

Facsimile: +61 7 3867 9110

Emergency Telephone: 1 800 033 111 (ALL HOURS)

2. Composition/information on ingredients

Product Description: Synthetic pyrethroid insecticide and miticide.
Light brown liquid with a solvent odour.

Solvent naphtha (petroleum), light arom. 64742-95-6	81% (763 g/L)	R65
Surfactants	10-29%	R36
Bifenthrin 82657-04-3	11% (100 g/L)	R25 R50/53

3. Hazards identification

Risk Phrases: Harmful if swallowed. Irritating to eyes. Harmful: May cause lung damage if swallowed. Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

Poisons Schedule: S6 Poison.

4. First-aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126; New Zealand 03 474 7000).

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Inhalation: Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin Contact: If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If irritation occurs seek medical advice.

Eye Contact: If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.

Notes to physician: Treat symptomatically. In cases of skin contact with synthetic pyrethroids, it has been reported that topical application of Vitamin E cream has a therapeutic value, eliminating almost 100% of the skin pain associated with synthetic pyrethroids.

5. Fire-fighting measures

Specific Hazards: Combustible liquid.

Fire-fighting advice: On burning will emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Suitable Extinguishing Media: Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

6. Accidental release measures

SMALL SPILLS: Wear protective equipment to prevent skin and eye contact. Avoid breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers for disposal.

LARGE SPILLS: Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contact. Avoid breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. If contamination of crops or waterways has occurred advise emergency services or State Department of Agriculture.

7. Handling and storage

Handling advice: Avoid skin and eye contact and breathing in vapour. Keep out of reach of children.

Storage advice: Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers.

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.

8. Exposure controls/personal protection

Occupational Exposure Limits:

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No value assigned for this specific material by the National Occupational Health and Safety Commission.

Engineering Control Measures:

IN THE WORKPLACE: Use in well ventilated areas. Use with local exhaust ventilation or while wearing organic vapour/particulate respirator. Keep containers closed when not in use.

Personal Protective Equipment:

Orica Personal Protection Guide No. 1, 1998: H - OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, RESPIRATOR.

MANUFACTURE, PACKAGING AND TRANSPORT: Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If dust exists, wear dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

PREPARATION AND USE OF PRODUCT: Avoid contact with eyes and skin. Avoid inhaling spray mist. When preparing spray, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and goggles. When using the prepared spray with hand held application equipment in bananas and grapes, wear cotton overalls buttoned to the neck and wrist and elbow length PVC gloves. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

9. Physical and chemical properties

Physical state:	Liquid
Colour:	Light Brown
Odour:	Solvent
Solubility:	Dispersible in water.
Specific Gravity:	0.93
Relative Vapour Density (air=1):	N Av
Vapour Pressure (20 °C):	N Av
Flash Point (°C):	68
Flammability Limits (%):	N Av
Autoignition Temperature (°C):	N Av
% Volatile by Weight:	N Av
Solubility in water (g/L):	N Av
Melting Point/Range (°C):	N Av
Boiling Point/Range (°C):	N Av
Decomposition Point (°C):	N Av
Sublimation Point (°C):	N App
pH:	N App
Viscosity:	N Av
Evaporation Rate:	N Av

Partition Coefficient: LogPow (Bifenthrin): >6

10. Stability and reactivity

Stability: Reacts with oxidising agents . Product is stable for at least 2 years under ambient storage conditions.

11. Toxicological information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product

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label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Swallowing can result in nausea, vomiting, diarrhoea and abdominal pain. Swallowing large amounts may result in muscle tremors, central nervous system depression, convulsions and coma. If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs.

Eye contact: An eye irritant.

Skin contact: Contact with skin may result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis. May cause tingling, burning, itching or numbness in exposed areas which is transient, that can last up to 36 hours.

Inhalation: Breathing in vapour can result in headaches, dizziness and possible nausea. Breathing in high concentrations may result in the same symptoms described for 'INGESTION'.

Long Term Effects:

No information available for the product.

Toxicological Data:

PRODUCT DATA:

Oral LD50 (rat): 531 mg/kg.
Dermal LD50 (rabbit): >2,000 mg/kg.

For BIFENTHRIN:

SKIN: Non-irritant (rabbit). Not a skin sensitiser (guinea pig).

EYES: Non-irritant (rabbit).

Bifenthrin was not genotoxic in a battery of mutagenicity assays.

Animals studies have shown that bifenthrin is not teratogenic nor does it cause reproductive toxic effects.

ADI (Acceptable Daily Intake) for humans is 0.01 mg/kg bw/day.

The toxicity of the product may also be attributed to the solvent it contains which may cause central nervous system depression. Additive effects may occur with mixtures of solvents. Some solvents have irritating effects on the eyes and skin.

The irritant nature of the product is attributed to the additive effects of the surfactants and solvent components.

12. Ecotoxicological information

Avoid contaminating waterways.

For BIFENTHRIN:

Environmental fate, persistence and degradation:

Bifenthrin is moderately stable in soil under aerobic conditions, with a half life ranging from 65-125 days (depending upon soil type). It has a high affinity for organic matter and is not mobile. There is a potential for bioconcentration up the food chain.

Aquatic toxicity:

Very toxic to aquatic organisms. Risk of bioaccumulation in an aquatic species is high.

Log Octanol/Water Partition Coefficient: >6

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48hr LC50 (Daphnia magna): 0.00016 mg/L.
96hr LC50 (rainbow trout): 0.00015 mg/L.
96hr LC50 (bluegill sunfish): 0.00035 mg/L.

Terrestrial toxicity: Harmful to terrestrial species. Harmful to bees.
Oral LD50 (mallard duck): 2,150 mg/kg.
Oral LD50 (bobwhite quail): 1,800 mg/kg.
Oral LD50 (ug/bee): 0.1 ug/bee.
Contact LD50 (ug/bee): 0.0146 ug/bee.

13. Disposal considerations

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 clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

For 110L CONTAINER: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

For 1,000L CONTAINER: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

14. Transport information

Road and Rail Transport

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

This material is classified as a severe Marine Pollutant (PP) according to the International Maritime Dangerous Goods Code.

UN No: 3082
Class-primary: 9 Miscellaneous Dangerous Goods
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS BIFENTHRIN)

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

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15. Regulatory information

Classification: This material is hazardous according to criteria of NOHSC.
Xn: Harmful
Xi: Irritant

Risk Phrase(s): R22: Harmful if swallowed.
R36: Irritating to eyes.
R65: Harmful: May cause lung damage if swallowed.

Safety Phrase(s): S1/2: Keep locked up and out of the reach of children.
S13: Keep away from food, drink and animal foodstuffs.
S24/25: Avoid contact with skin and eyes.
S36/37: Wear suitable protective clothing and gloves.

Poisons Schedule: S6 Poison.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS) or are National Registration Authority (NRA) approved active constituents.

16. Other information

Supplier Material Safety Data Sheet; 1998.

In: 'The Pesticide Manual'. 12th Edition. Ed. CDS Tomlin. British Crop Protection Society, 2000.

ADI List, Commonwealth Department of Health and Family Services. 2001.

In 'Medical Toxicology - Diagnosis and Treatment of Human Poisoning'. Ed Ellenhorn and Barceloux. Elsevier, New York 1988.

Reason(s) for Issue:

First Issue Primary MSDS

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since FMC Corporation cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their FMC Corporation representative or FMC Corporation direct at the contact details on page 1.

FMC Corporation's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

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