

Material Safety Data Sheet



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product name: SHIRLAN (R) FUNGICIDE

Synonyms: Crop Care MSDS No. 40449

CAS-No.:

Molecular Formula:

Supplier: Crop Care Australasia Pty Ltd
ACN: 061 362 347
Street Address: 77 Tingira Street
Pinkenba 4008
Australia
Telephone: + 61 7 3867 9100
Facsimile: + 61 7 3867 9110

Emergency telephone number: 1 800 033 111 (ALL HOURS)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Recommended use: Fungicide.

Appearance: Light brown liquid (suspension).

CHEMICAL ENTITY	CAS NO.	PROPORTION
Fluazinam	79622-59-6	38% (500 g/L)
Other ingredients determined not to be hazardous-		VHIGH

		100%

PROPORTION (% weight per weight):

VHIGH >60, HIGH 30-60, MED 10-29, LOW 1-9, VLOW <1

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.

3. HAZARDS IDENTIFICATION

Hazardous according to criteria of Worksafe Australia.

Hazard Category

Xi Irritant

R-phrases(s)

R36/38 Irritating to eyes and skin.

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R43 May cause sensitization by skin contact.

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by road or rail.

Class: 9 Miscellaneous Dangerous Goods

Poisons Schedule (Aust)/Toxic Substance (NZ): S6

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

4. FIRST AID MEASURES

Poison Information Centres in each State capital city can provide additional assistance for scheduled poisons (Phone; Australia 131 126).

Ingestion: Rinse mouth with water. Give plenty of water to drink. If vomiting occurs give further water. Seek medical advice.

Eye contact: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash contaminated skin. Seek Immediate medical assistance.

Skin contact: Immediately wash contaminated skin with plenty of water. Remove contaminated clothing and wash before re-use. If swelling, redness, blistering, or irritation occurs seek medical advice.

Inhalation: Remove victim from exposure - avoid becoming a casualty. Seek medical advice if effects persist.

Notes to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Specific hazards: Non combustible material.

Fire fighting further advice: Not combustible, however following evaporation of aqueous component residual material will burn if ignited. On burning will emit toxic fumes. Fire fighters to wear self-contained breathing apparatus if risk of exposure to 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 contamination. 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: Wear protective equipment to prevent skin and eye contamination. Contain - prevent run-off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly

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labelled drums for disposal. If contamination of crops or waterways has occurred advise emergency services or State Department of Agriculture.

7. HANDLING AND STORAGE

Storage: Store in the closed original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Store in a locked room of place away from children, animals, food, feedstuffs, seed and fertilizers.

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits

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

Engineering measures: Use only in well ventilated areas. Keep containers closed when not in use.

Personal protection equipment: Orica Personal Protection Guide No.1, 1998: C - OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES (S).

MANUFACTURING, PACKAGING AND TRANSPORT: Wear overalls, chemical goggles and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

PREPARATION AND USE OF PRODUCT: Avoid contact with skin and eyes. Repeated or prolonged exposure may cause allergic disorders. Do not inhale vapour. When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and a face shield. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Light brown liquid (suspension).

Solubility: Miscible in water.

Specific Gravity (20 C)	: 1.259	Melting Point (C)	: N App
Rel Vapour Density (air=1)	: N Av	Boiling Point (C)	: N Av
Vapour Pressure (20 C)	: N Av	Decomp. Point (C)	: N Av
Flash Point (C)	: N App	Sublimation Point	: N App
Flammability Limits (%)	: N App	pH	: 7.11-7.13
Autoignition Temp (C)	: N App	Viscosity	: 638 mPa.s
% Volatile by volume	: N Av	Evaporation Rate	: N Av

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Solubility in water : Miscible (n-Butyl acetate=1)
(Typical values only - consult specification sheet)
N Av = Not available N App = Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable for at least 2 years when stored in the original unopened container at ambient temperatures.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled are:

Acute Effects

Ingestion: No adverse effects expected, however large amounts may cause nausea and vomiting.

Eye contact: An eye irritant.

Skin contact: Contact with skin will result in irritation. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

Inhalation: Inhalation of vapours, mists or aerosols may produce respiratory irritation.

Long Term Effects

No information available for the product.

Acute toxicity / Chronic toxicity

Oral LD50 (rat): >5000 mg/kg. (1)

Dermal LD50 (rat): >2000 mg/kg. (1)

Inhalation LC50 (rat): >0.55 mg/L/4hr. (1)

SKIN: Severe irritant (rabbit). May cause skin sensitisation. (1)

EYES: Severe irritant (rabbit). (1)

May cause skin sensitisation. (1)

Patch testing on 10 volunteers showed that the product caused a type IV allergic reaction.

Symptoms observed include localised swelling itchiness and red spots in affected skin regions.

Once exposure has stopped full recovery occurs within a short period of time. (2)

ADI (Acceptable Daily Intake) in humans is 0.004 mg/kg/day. (3)

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

AQUATIC TOXICITY - (1)

Very toxic to aquatic organisms.

96hr LC50 (Salmo gairdneri): 0.11 mg/L.

48hr EC50 (Selenastrum capricornatum): 0.54 mg/L.

48hr EC50 (Daphnia magna): 0.19 mg/L.

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ENVIRONMENTAL FATE, DISTRIBUTION AND PERSISTENCE - (1)

Half-life in soil is 4 days.

Not readily biodegradable in water (test: 5% CO₂, 84 days).

13. DISPOSAL CONSIDERATIONS

Triple or preferably pressure rinse containers before disposal. Add rinsings to sprak tank mix. 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 the containers in a local authority landfill. If no landfill is available bury the containers below 500mm 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.

14. TRANSPORT INFORMATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by road or rail.

UN-No: 3082
Class: 9 Miscellaneous Dangerous Goods
Hazchem code: 2X
EPG: 9C1
Packing group: Packing Group 3

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS FLUAZINAM) MARINE POLLUTANT

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), however exemptions may apply.

15. REGULATORY INFORMATION

Hazardous according to criteria of Worksafe Australia.

Hazard Category

Xi Irritant

R-phrases(s)

R36/38 Irritating to eyes and skin.
R43 May cause sensitization by skin contact.

S-phrases(s)

S 2 Keep out of reach of children.
S24/25 Avoid contact with skin and eyes.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S60 This material and/or its container must be disposed of as hazardous waste.
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

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16. OTHER INFORMATION

Literary reference

- (1) Supplier Safety Data Sheet - Frownicide 50% SC, ISK Biosciences Euope S.A.; No date provided.
- (2) Review of study results, Zeneca Agrochemicals Stewardship and Safety Department.
- (3) ADI List, Commonwealth Department of Health and Family Services. 04/97. This Material Safety Data Sheet has been prepared by SHE Pacific Pty Ltd on behalf of its clients.

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Reason(s) For Issue: Five Yearly Update.
Change in Health Effects Data.
Change in Personal Protection Requirements.
Change First Aid Requirements.
Change in Fire Management Requirements.

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Orica Limited and its subsidiaries cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.

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

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.