

Material Safety Data Sheet



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

Product name: IMIDAN (R) INSECTICIDE / MITICIDE

Synonyms: Crop Care MSDS No. 40145

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

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

2. COMPOSITION/INFORMATION ON INGREDIENTS

Recommended use: Insecticide/miticide.

Appearance: Pale yellow liquid with a solvent odour.

CHEMICAL ENTITY	CAS NO.	PROPORTION
Aromatic hydrocarbon solvent	64742-94-5	HIGH
Phosmet technical	732-11-6	15% (150 g/L)
Cyclohexanone	108-94-1	MED
Emulsifiers	-	LOW

		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

Xn Harmful

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R-phrases(s)

R22 Harmful if swallowed.

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

Class: 6.1 Toxic

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.

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.

Ingestion: Rinse mouth with water. If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek immediate medical assistance.

Eye contact: Irrigate with copious quantities of water for 15 minutes. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Skin contact: Immediately wash contaminated skin with plenty of water followed by soap and water. Remove contaminated clothing and wash before re-use. A component (phosmet) can be absorbed through the skin with resultant toxic effects. If poisoned by skin absorption give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek immediate medical advice.

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. If poisoned by absorption through lungs give one atropine tablet every 5 minutes until dryness of the mouth occurs. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In event of cardiac arrest, apply external cardiac massage. Seek medical advice.

Notes to physician: Anti-cholinesterase effects. Effects may be delayed.

Treatment:

Give 2 mg of atropine sulphate intramuscularly or, in severe cases, intravenously, repeated at 10-15 min intervals until dryness of the mouth occurs. When this response is achieved it is advisable to maintain a mild degree of atropinisation for 24 hours. If stopped too early pulmonary oedema may develop.

Atropine should not be given to a cyanosed patient.

Specific antidote: 2-PAM (2-Pyridine aldoxime methiodide) should only be given when there is full atropinisation. PAM is administered by slow intravenous injection in 1 g doses, repeated in 30 mins. if necessary.

A person who has suffered organophosphate poisoning should be kept under medical supervision, preferably in hospital, for 24-48 hours until all likelihood of relapse is past.

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5. FIRE-FIGHTING MEASURES

Specific hazards: Combustible liquid.

Fire fighting further advice: Combustible liquid. On burning will emit toxic fumes. Fire fighters to wear self-contained breathing apparatus 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 contamination and the inhalation of vapours. 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. Wash area down with detergent and excess water.

LARGE SPILLS: Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled drums for disposal. Wash area down with detergent and excess water. If contamination of crops or waterways has occurred advise emergency services or State Department of Agriculture.

7. HANDLING AND STORAGE

Storage: Store in a cool place, out of direct sunlight and a in well ventilated area. Store away from oxidizing agents and foodstuffs. Keep containers closed at all times - check regularly for leaks.

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.

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).

However, Exposure Standards for constituent:

	TWA		NOTICES
	ppm	mg/m ³	
Cyclohexanone	25	100	Sk.

As published by the National Occupational Health and Safety Commission (Worksafe Australia).

TWA - the Time-Weighted Average airborne concentrations over an

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eight-hour working day, for a five-day working week over an entire working life.

'Sk' notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

If the directions for use on the product label are followed, exposure of individuals using the product will not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Engineering measures: Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

Personal protection equipment: OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES (Short), RESPIRATOR.

Code:H -Orica Personal Protection Guide No.1, 1998

MANUFACTURE, PACKAGING AND TRANSPORT: Avoid skin and eye contact and the inhalation of vapour. Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour 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 storing or re-using.

PREPARATION AND USE OF PRODUCT: Avoid inhaling vapour or spray mist. Obtain an emergency supply of Atropine tablets 0.6 mg. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield. Wash hands after use. After each day's use, wash gloves, face shield and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Pale yellow liquid with a solvent odour.

Solubility: Emulsifiable in water.

Specific Gravity (20 C)	: 1.026	Melting Point (C)	: N App
Rel Vapour Density (air=1)	: >1	Boiling Point (C)	: N Av
Vapour Pressure (20 C)	: N Av	Decomp. Point (C)	: N Av
Flash Point (C)	: 63-65	Sublimation Point	: N App
Flammability Limits (%)	: N Av	pH	: N Av
Autoignition Temp (C)	: N Av	Viscosity	: N Av
% Volatile by volume	: 79	Evaporation Rate	: N Av
Solubility in water (g/L)	: N Av	(n-Butyl acetate=1)	
(Typical values only - consult specification sheet)			
N Av = Not available		N App = Not applicable	

10. STABILITY AND REACTIVITY

Stability: Reacts with oxidising agents.

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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: The following symptoms, listed in approximate order of appearance, begin within 30-60 minutes and are at a maximum in 2-8 hours: Mild - anorexia, headache, dizziness, weakness, anxiety, sub-sternal discomfort, tremors of the tongue and eyelids, contraction of the pupil and impairment of visual acuity. Moderate - Nausea, salivation, tearing, abdominal cramps, vomiting, sweating, slow pulse and muscular twitching. Severe - Diarrhoea, pinpoint and non-reactive pupils, respiratory difficulty, pulmonary oedema, cyanosis, loss of sphincter control, convulsions, coma and heart block. Hyperglycaemia and possible pancreatitis have occurred. (1)

Eye contact: May be 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. A component (profenofos) can be absorbed through the skin. Effects can include those described for 'INGESTION'.

Inhalation: Vapour, mists and aerosols may be irritant to mucous membranes and respiratory tract. Inhalation of vapour, mists or aerosols may result in the effects described in 'INGESTION'. Inhalation of high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and, if exposure is prolonged, unconsciousness.

Long Term Effects

Repeated exposure to concentrations of phosmet are insufficient to produce acute effects however a single exposure may result in symptoms with chronic exposure. Available evidence indicates that repeated or prolonged exposure to solvents could result in central nervous system disorders.

Acute toxicity / Chronic toxicity

No LD50 data available for product, however for the constituent,

PHOSMET TECHNICAL (1):

Oral LD50(rat): 113-160 mg/kg.

Dermal LD50(rabbit): >5000 mg/kg

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

EYES: Mild irritant (rabbit).

Inhalation LC50(rat): 2.76 mg/L/hr.

Studies in animals have shown that repeated doses produce no significant effects other than cholinesterase inhibition.

Studies in animals have shown that repeated exposures do not produce carcinogenic or teratogenic effects.

ADI (Acceptable Daily Intake) in humans is 0.01 mg/kg/day. (2)

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

PHOSMET TECHNICAL (1):

AQUATIC TOXICITY:

Very toxic to aquatic organisms.

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96hr LC50 (trout): 0.23 mg/L.
96hr LC50 (bluegill sunfish): 0.07 mg/L.
48hr LC50 (daphnia magna): 8.5 ug/L.
Log Pow is 2.95.
Risk of bioaccumulation in an aquatic species is low-moderate.
TERRESTRIAL TOXICITY:
Dietary LD50 (mallard duck): >5000 mg/kg diet.
Dietary LD50 (bobwhite quail): 507 mg/kg diet.
LD50 (bees): 0.01 mg/bee.
PERSISTENCE AND DEGRADATION:
There is evidence of rapid degradation in soil and water.

13. DISPOSAL CONSIDERATIONS

Triple or preferably pressure rinse the container before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. Break, crush, or puncture and bury empty container 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.

14. TRANSPORT INFORMATION

Road and Rail Transport

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

UN-No: 3018
Class: 6.1 Toxic
Hazchem code: 2X Hazchem Code
EPG: 6A1
Packing group: Packing Group 3

Proper Shipping Name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC (CONTAINS PHOSMET), MARINE POLLUTANT

Segregation Dangerous Goods:

Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), if both are in bulk, toxic gases (Class 2.3), spontaneously combustible substances (Class 4.2), nitromethane, oxidizing agents (Class 5.1), organic peroxides (Class 5.2), foodstuff or foodstuff empties, radioactive substances (Class 7), however exemptions may apply.

15. REGULATORY INFORMATION

Hazardous according to criteria of Worksafe Australia.

Hazard Category

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R-phrase(s)

R22 Harmful if swallowed.

S-phrase(s)

S20 When using do not eat or drink.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

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

16. OTHER INFORMATION

Literary reference

- (1) Safety Data Sheet - Phosmet technical; CDS#15229; Orica Australia Pty Ltd. 04/93
- (2) ADI List, Commonwealth Department of Human Services and Health 04/97

This Material Safety Data Sheet has been prepared by SHE Pacific Pty Ltd on behalf of Orica Ltd and its subsidiary companies.

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Reason For Issue: Change in First Aid Requirements.
Change in Spills Management Requirements.
Change in Storage and Transport Requirements.
Change in Health Effects Data.
Change in Environmental Data.

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

(R) - 'Imidan' is used under licence from the Trade Mark proprietor.

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.