



SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name	Larvin® 800 WG Insecticide
Other names	none
Product code (UVP)	05927390
Chemical Group	oxime carbamate
Recommended use	Insecticide
Chemical Formulation	Water dispersible granules (WG)
Company	Bayer CropScience Pty Ltd -ABN 87 000 226 022 391-393 Tooronga Road, East Hawthorn Victoria 3123, Australia
Telephone	(03) 9248 6888
Technical Information Service	1800 804 479
Facsimile	(03) 9248 6800
Website	www.bayercropscience.com.au
Emergency telephone no.	1800 033 111 Orica SH&E Shared Services

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

HAZARDOUS SUBSTANCE

DANGEROUS GOODS

Hazardous classification	Hazardous (National Occupational Health and Safety Commission - NOHSC)
R-phrase(s)	R23/25 - Toxic by inhalation and if swallowed. R36 - Irritating to eyes. R43 - May cause sensitisation by skin contact.
S-phrase(s)	See sections 4, 5, 6, 7, 8, 10, 12, 13.
ADG Classification	"Dangerous goods" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. - See Section 14.
SUSMP classification (Poison Schedule)	Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature
Thiodicarb 800g/kg

Chemical Name	CAS-No.	Concentration [%]
Thiodicarb	59669-26-0	80.00
Other ingredients (non-hazardous) to 100%		

SECTION 4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13



11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.

Inhalation

Move to fresh air in case of accidental inhalation of vapours or decomposition products. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.

Skin contact

Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion

Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Notes to physician

Symptoms

Temporary blurred vision due to contraction of the pupils (miosis) following contact with the eyes., Bradycardia, Low blood pressure, Salivation, Bronchial hypersecretion, Vomiting, Diarrhoea, Sweating, Muscular fasciculation, Spasm, Breathing difficulties, Respiratory paralysis, Somnolence, Coma, Respiratory failure, Hypothermia, Convulsions, Nausea

Risks

This product is a cholinesterase inhibitor carbamate.

Treatment

Monitor: respiratory, cardiac and central nervous system.
Monitor: blood picture.
Monitor: red blood cell and plasma cholinesterase.
ECG - monitoring (Electrocardiogram).
Oxygen or artificial respiration if needed.
Keep respiratory tract clear.
In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable.
The following antidote is generally accepted: atropine.
Before antidote is administered, either clear symptoms of poisoning have to be present or the cholinesterase activity is inhibited to below 30% of normal.
In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens.
Contraindications: oximes (pralidoxime, obidoxime).

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Water spray
Carbon dioxide (CO2)
Dry powder
Foam

Hazards from combustion products



In the event of fire the following may be released:
Hydrogen cyanide (hydrocyanic acid)
Carbon monoxide (CO)
Methyl isocyanate
Sulphur oxides
Nitrogen oxides (NOx)

Precautions for fire-fighting

In the event of fire and/or explosion do not breathe fumes.
In the event of fire, wear self-contained breathing apparatus.
Contain the spread of the fire-fighting media.
Do not allow run-off from fire fighting to enter drains or water courses.
Whenever possible, contain fire-fighting water by diking area with sand or earth.

Hazchem Code 2X

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid contact with spilled product or contaminated surfaces.
When dealing with a spillage do not eat, drink or smoke.
Use personal protective equipment.
Keep unauthorized people away.

Environmental precautions

Do not allow to get into surface water, drains and ground water.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal.
Avoid dust formation.
Decontaminate tools and equipment following cleanup.

Reference to other sections

Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7. HANDLING AND STORAGE

Handling

Hygiene measures

Avoid contact with skin, eyes and clothing.
Keep working clothes separately.
Wash hands immediately after work, if necessary take a shower.
After each day's use, wash gloves, face shield or goggles and contaminated clothing.
Garments that cannot be cleaned must be destroyed (burnt).

Advice on protection against fire and explosion

Dust may form explosive mixture in air.
Care should be taken to avoid formation of dust from abraded granules.

Storage

Requirements for storage areas and containers

Keep out of the reach of children.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in original container.
Keep away from direct sunlight.



Advice on common storage
Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Biological limit values
none
Monitoring workers for blood cholinesterase levels is recommended.

Components with workplace control parameters

Not established.

Personal protective equipment - End user

Respiratory protection	AS/NZS 1715/1716 approved respirator
Hand protection	Elbow-length PVC or nitrile gloves
Eye protection	Face-shield or goggles
Skin and body protection	Cotton overall buttoned to the neck and wrist Washable hat Impervious footwear

Engineering Controls

Advice on safe handling
Use only in area provided with appropriate exhaust ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	granular
Colour	beige to brown
Odour	no data available

Safety data

pH	5.6 - 6.4 at 10 %
Flash point	no data available
Ignition temperature	265 °C
Upper explosion limit	no data available
Lower explosion limit	no data available
Vapour pressure	5.7 mPa at 20 °C The value mentioned relates to the active ingredient thiodicarb.
Relative vapour density	no data available
Density	no data available



Bulk density	0.63 kg/m ³
Water solubility	dispersible
Partition coefficient: n-octanol/water	no data available
Other information	Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	Extremes of temperature and direct sunlight.
Materials to avoid	Strong acids Strong bases Brass Iron chlorides Rust Metal salts Cupric chloride
Materials to avoid	Store only in the original container.
Hazardous Decomposition Products	Thermal decomposition can lead to release of: Oxides of carbon Nitrogen oxides (NO _x) Sulphur oxides Acetonitrile Dimethyl disulfide Methomyl Methyl isocyanate
Thermal decomposition	175 - 190 °C Exothermic decomposition.
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Inhalation	Toxic by inhalation. Do not breathe dust. May cause respiratory tract irritation. May produce symptoms similar to those from ingestion.
Skin	Toxic by skin absorption May cause sensitisation by skin contact. May cause mild irritation to the skin. May produce symptoms similar to those from ingestion. Avoid contact with skin and clothing.
Eye	Causes eye irritation. Causes redness, tearing. Avoid contact with eyes.



Ingestion	Toxic if swallowed. This product causes reversible cholinesterase inhibition without long term effects. Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced symptoms. May lead to rapid onset of nausea, vomiting, diarrhea, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression and convulsions. Do not take internally.
Chronic exposure	This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic).
Acute oral toxicity	LD50 (rat) 129 mg/kg
Acute inhalation toxicity	LC50 (rat) 0.52 mg/l Exposure time: 4 h Determined in the form of dust.
Acute dermal toxicity	LD50 (rat) > 2,000 mg/kg
Skin irritation	Slight irritant effect - does not require labelling. (rabbit)
Eye irritation	Irritating to eyes. (rabbit)
Sensitisation	Sensitising (guinea pig) OECD Test Guideline 406, Buehler test
Chronic toxicity	Thiodicarb caused reversible cholinesterase inhibition without long term effects in animal studies.
Assessment Mutagenicity	Thiodicarb was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.
Assessment Carcinogenicity	Thiodicarb caused at high dose levels an increased incidence of tumours in the following organ(s): liver, testes. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.
Assessment toxicity to reproduction	Thiodicarb caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Thiodicarb is related to parental toxicity.
Assessment developmental toxicity	Thiodicarb caused developmental toxicity only at dose levels toxic to the dams. Thiodicarb caused a reduced pup survival. The developmental effects seen with Thiodicarb are related to maternal toxicity.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects



Toxicity to fish	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) > 3.3 mg/l Exposure time: 96 h
Toxicity to fish	LC50 (<i>Cyprinodon variegatus</i> (sheepshead minnow)) 0.53 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Water flea (<i>Daphnia magna</i>)) 0.027 mg/l Exposure time: 48 h
Toxicity to aquatic plants	IC50 (<i>Pseudokirchneriella subcapitata</i>) > 18 mg/l Growth rate Exposure time: 72 h
Toxicity to other organisms	(<i>Apis mellifera</i> (bees)) The value mentioned relates to the active ingredient thiodicarb. Toxic to bees.
Toxicity to other organisms	LC50 (<i>Anas platyrhynchos</i> (Mallard duck)) > 5,620 mg/kg Exposure time: 8 d The value mentioned relates to the active ingredient thiodicarb.
Toxicity to other organisms	LC50 (<i>Colinus virginianus</i> (Bobwhite quail)) > 5,620 mg/kg Exposure time: 8 d The value mentioned relates to the active ingredient thiodicarb.
Additional ecological information	No other effects to be mentioned. The ecological data given are those of the active ingredient.
Biodegradability	Readily biodegradable. The value mentioned relates to the active ingredient thiodicarb.
Stability in soil	In Soil : DT50 3 - 8 d. Depending on soil type. The value mentioned relates to the active ingredient thiodicarb.
Bioaccumulation	Bioconcentration factor (BCF): 6.3 The value mentioned relates to the active ingredient thiodicarb.
Additional Environmental Information	no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Plastic and foil bags:
Single rinse before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Puncture and bury empty bags 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 bags and product should not be burnt.

SECTION 14. TRANSPORT INFORMATION

ADG
UN number 2757
Class 6.1



Subsidiary Risk	None
Packaging group	III
Description of the goods	CARBAMATE PESTICIDE, SOLID, TOXIC (THIODICARB MIXTURE)
Hazchem Code	2X

IMDG

UN number	2757
Class	6.1
Subsidiary Risk	None
Packaging group	III
EmS	F-A , S-A
Marine pollutant	YES
Description of the goods	CARBAMATE PESTICIDE, SOLID, TOXIC (THIODICARB MIXTURE)

IATA

UN number	2757
Class	6.1
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	NO
Description of the goods	CARBAMATE PESTICIDE, SOLID, TOXIC (THIODICARB MIXTURE)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 48522
See also Section 2.

SECTION 16. OTHER INFORMATION

Trademark information Larvin® is a registered trademark of the Bayer Group.

This SDS 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 SDS 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.

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

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

END OF SDS