

MATERIAL SAFETY DATA SHEET



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STATEMENT OF HAZARDOUS NATURE

Hazardous according to criteria of National Occupational Health and Safety Commission.
R20 - Harmful by inhalation.
R25 - Toxic if swallowed.

COMPANY DETAILS:

Company: Bayer CropScience Pty Ltd ABN 87 000 226 022
Address: 391 - 393 Tooronga Road, East Hawthorn
Victoria 3123 Australia
Telephone/Facsimile: (03) 9248 6888/(03) 9248 6800
Website Address: www.bayercropscience.com.au
Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

IDENTIFICATION

Product Name: **Larvin® 375 Insecticide**
Other Names: None assigned
Manufacturer's Product Code: Not available
SAP Product Code: 16967 (5 L), 16949 (20 L), 16957 (200 L)
UN Number: 2992
Dangerous Goods Class and Subsidiary Risk: 6.1
No subsidiary risk
Hazchem Code: 2X
Proper Shipping Name: CARBAMATE PESTICIDE, LIQUID, TOXIC (contains thiodicarb)
Packing Group: III
EPG: 34 - Dangerous Goods Initial Emergency Response Guide
Chemical Family: Oxime carbamate
Poisons Schedule Number: 6
Use: Agricultural insecticide

Physical Description/Properties

Appearance: Viscous cream coloured suspension with slight sulphurous odour
Boiling Point/Melting Point: Boiling point approx. 100 °C
Vapour Pressure: Negligible
Density: 1.130 at 20° C
Flashpoint: Non flammable
Flammability Limits: Not applicable
Solubility in Water: Miscible (thiodicarb is practically insoluble)

Other Properties:

pH: 4.0 - 5.5 (1% dilution)
Formulation: Suspension concentrate

LARVIN 375 INSECTICIDE

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Ingredients:

Chemical Name:	CAS Number:	Proportion (g/L):
Thiodicarb	[59669-26-0]	375
Other ingredients, including water	(non hazardous)	755

HEALTH HAZARD INFORMATION

Health Effects:

Acute:

Swallowed: Poisonous if swallowed. This product contains thiodicarb, a reversible cholinesterase inhibitor. Exposure may cause toxic signs and symptoms due to the stimulation of the parasympathetic nervous system. Symptoms include nausea, vomiting, diarrhoea, pinpoint pupils, blurred vision, excess salivation, profuse sweating, abdominal cramps, muscular weakness, bronchial hypersecretion, dyspnoea, anxiety, temporary paralysis, respiratory depression, confusion and in severe cases, convulsions. Repeated overexposure may cause more pronounced signs and symptoms.

Eye: May irritate the eyes.

Skin: Poisonous if absorbed by skin contact. May produce symptoms similar to those from ingestion. May irritate the skin.

Inhaled: Poisonous if inhaled. May produce symptoms similar to those from ingestion.

Chronic: Thiodicarb is not teratogenic or carcinogenic in animal studies. Two of the nine *in vitro* mutagenicity studies with thiodicarb were positive, while an *in vivo* mutagenicity study in rats was negative. The weight of evidence suggests that thiodicarb is not a mutagen.

First Aid

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.
DO NOT attempt to give anything by mouth to a semi-conscious or unconscious person.

Swallowed: Wash out mouth with water. Do not induce vomiting. Give a glass of water. Keep patient at rest and seek medical advice as above. If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly.

Eye: Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.

HEALTH HAZARD INFORMATION – continued

Skin: If poisoned by skin absorption, remove any contaminated clothing and wash skin thoroughly. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly.

Inhaled: Remove victim to fresh air. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly. If breathing is difficult, administer oxygen if available. If breathing stops, administer CPR (cardio-pulmonary resuscitation).

First Aid Facilities: Ensure washing facilities are available. Obtain an emergency supply of atropine tablets 0.6 mg.

Advice to Doctor: This product contains a carbamate insecticide, thiodicarb, which is a rapidly reversible cholinesterase inhibitor.

Brief summary of signs and symptoms:

Local: Slight skin and eye irritation

Systemic: Headache, perspiration, lacrimation and salivation, flushing, dizziness, nausea, vomiting and diarrhoea. Abdominal pain, chest tightness, hypotension and bradycardia. Blurring of vision, muscular twitching, convulsions and depression of the respiratory centre.

Treatment:

For *local contamination* treatment should be symptomatic and supportive. In case of skin or eye contamination, treat as documented above under First Aid. Care should be taken to avoid personal contamination.

In case of *systemic poisoning* the following measures should be taken: Monitor respiratory, cardiac and central nervous system.

Monitor red blood cell and plasma cholinesterase, and ECG.

Carry out gastric lavage and charcoal administration.

Endotracheal intubation and artificial respiration as necessary

If necessary anticonvulsant therapy with diazepam i.v.

Atropine sulphate is an antidote. Administer 2 mg i.v., repeated until fully atropinised. Good oxygenation is essential for the tolerance of atropine.

The medical advice for ingestion of thiodicarb, the active ingredient in this product, recommends induction of vomiting under the following circumstances:

1. If patient is fully conscious
2. If less than 30 minutes after ingestion

Contraindications: Oximes (pralidoxime, obidoxime), succinyl choline, aminophiline, morphine unless under controlled ventilation

Recovery is expected to be spontaneous.

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PRECAUTIONS FOR USE

- Exposure Standards:** No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia). Bayer recommends a Permissible Exposure Limit of 4 mg/m³ for thiodicarb.
- Engineering Controls:** Control process conditions to avoid contact. Use local exhaust or mechanical ventilation during manufacture. Use only in well-ventilated areas.
- Personal Protection:**
- Eyes:** Wear face shield or goggles.
 - Clothing:** Wear cotton overalls buttoned to neck and wrist, a washable hat and impervious footwear.
 - Gloves:** Wear elbow-length PVC gloves.
 - Respiratory:** Wear a half-facepiece respirator with combined dust and gas cartridge.
 - Other:** 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, respirator, face shield or goggles and contaminated clothing. Wash respirator with detergent and warm water.
- Flammability:** Non flammable.

SAFE HANDLING INFORMATION

Storage and Transport:

Handling & Storage Precautions: Keep out of reach of children. Avoid contact with eyes and skin and do not inhale spray mist. If product on skin, immediately wash area with soap and water. Store in the closed, original container in a cool, dry, well-ventilated area, out of direct sunlight. Protect from extremes of heat and cold. Store in a locked room or place away from children, animals, food, feedstuffs, seed and fertilisers.

Corrosivity Hazards: Not corrosive

Transport: This product is classified as a dangerous good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail: CARBAMATE PESTICIDE, LIQUID, TOXIC (contains thiodicarb), Class 6.1, Packing Group III, UN 2992.

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SAFE HANDLING INFORMATION – continued

Spills and Disposal:

Spillage or Leak
Procedures:

Avoid contact with the spilled material or contaminated surfaces. When dealing with spills wear personal protective clothing and equipment as described in the PERSONAL PROTECTION section above. Keep people and animals away and upwind. Prevent contamination of drains, sewers and watercourses. Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority. Neutralising chemicals: Hydrated lime or strong caustic solution. Decontaminate tools and equipment following cleanup.

Waste Disposal
Methods:

When returnable container is empty or contents no longer required return it to the point of purchase. For non-returnable containers, triple or (preferably) pressure rinse them 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. Dispose of waste product via a licensed disposal contractor to an approved landfill.

Fire/Explosion Hazard:

Extinguishing Media:

Dry chemical, carbon dioxide, foam or water spray.

Special Fire Fighting
Procedures:

Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715, 1716). Toxic decomposition products may be produced in a fire. Isolate area. Keep unnecessary people away and upwind. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area to prevent contamination of water sources. Dispose of fire control water and spillage later. Persons exposed to contaminated smoke should be examined by a doctor for symptoms of poisoning.

Reactivity Hazards:

Stable under normal conditions of use. Avoid extreme heat. Materials / chemicals to be avoided: brass, iron chlorides, rust, bases, mineral acids, metal salts, cupric chloride. Larvin 375 is unstable under highly acidic or highly alkaline conditions. Thermal decomposition products may include oxides of carbon and sulphur, acetonitrile, dimethyl sulfide, methomyl.

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OTHER INFORMATION:

Animal toxicity data: (product)	Oral LD ₅₀ (mg/kg)	166	Species: Rat
	Dermal LD ₅₀ (mg/kg)	> 2000	Species: Rabbit
	Inhalation LC ₅₀ (mg/L) (4 h)	1.51	Species: Rat
	Eye irritation	Slightly irritating	Species: Rabbit
	Skin irritation	Non-irritating	Species: Rabbit

Environmental / Ecological Effects: Hazardous to fish. Harmful to aquatic life. Dangerous to bees.

Technical thiodicarb:

LC₅₀ (96 h) for rainbow trout > 3.3 mg/L (flow through)
LC₅₀ (96 h) for bluegill sunfish 1.4 mg/L (flow through)
EC₅₀ (48 h) for *Daphnia magna* 0.027 mg/L (flow through)
Dietary LC₅₀ (8 days) for mallard duck > 5620 mg/kg
Dietary LC₅₀ (8 days) for bobwhite quail > 5620 mg/kg
IC₅₀ for algae > 18 mg/L

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

Special Precautions / Comments: None

Data Sources / References: Bayer CropScience product safety data

CONTACT POINT:

Emergency Contact Number: 1800 033 111 (Orica SH&E Shared Services)
Development Manager: (03) 9248 6888

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.

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.

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