

# MATERIAL SAFETY DATA SHEET

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## STATEMENT OF HAZARDOUS NATURE

Hazardous according to criteria of National Occupational Health and Safety Commission.

R28 – Very toxic if swallowed.

R24 – Toxic in contact with skin.

R36 – Irritating to eyes.

## COMPANY DETAILS:

Company: Aventis CropScience Pty Ltd A.C.N. 000 226 022  
Address: 391 – 393 Tooronga Road, East Hawthorn  
Victoria 3123 Australia  
Telephone/Facsimile: (03) 9248 6888/(03) 9248 6800  
Website Address: www.aventis.com.au  
Emergency Telephone Number: 1800 033 111 - SHE Pacific

## IDENTIFICATION

Product Name: **Monitor® Insecticide**  
Other Names: Not applicable  
Manufacturer's Product Code: TP-AUS003  
SAP Product Code: 17213 (5 L), 17099 (10 L), 17212 (200 L)  
UN Number: 3018  
Dangerous Goods Class and Subsidiary Risk: 6.1  
No subsidiary risk  
Hazchem Code: 2X  
Proper Shipping Name: ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC (contains methamidophos)  
Packing Group: II  
EPG: Guide 35 – Dangerous Goods - Initial Emergency Response Guide  
Chemical Family: Organophosphorus  
Poisons Schedule Number: 7  
Use: Agricultural insecticide used on fruit, vegetables and flowers

## Physical Description/Properties

Appearance: Clear pale yellow liquid with strong distinctive odour  
Boiling Point/Melting Point: BP 188° C  
Specific Gravity: 1.217 at 20° C  
Flashpoint: > 70° C  
Flammability Limits: Not available  
Solubility in Water: Miscible with water.

## Other Properties:

Vapour pressure at 20°C: 2.3 mPa (active ingredient)  
Formulation: Emulsifiable concentrate

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## Ingredients:

Chemical Name:	CAS Number:	Proportion g/L:
Methamidophos	[10265-92-6]	580
Other ingredients	(non hazardous)	637

## HEALTH HAZARD INFORMATION

### Health Effects:

*Acute:* The active ingredient in Monitor is an anticholinesterase compound. Symptoms typical of cholinesterase inhibition (for all routes of entry):  
Mild cases – symptoms appear within 12 hours or sooner if ingested. Headache, blurred vision, weakness, giddiness, sweating, mild chest pain, nausea and vomiting.  
Severe cases – symptoms appear in 1 to 3 hours. Cyanosis, muscular twitching, spasms, pinpoint pupils, respiratory paralysis.

Swallowed: The product is very toxic and could be fatal if swallowed.

Eye: May be irritating to the eyes. Product can be absorbed by the eyes giving symptoms of poisoning.

Skin: Product is poisonous if absorbed through the skin. For symptoms of poisoning, see above. Not expected to be irritating to the skin.

Inhaled: Product is poisonous if inhaled. For symptoms of poisoning, see above. Avoid breathing vapour or spray.

*Chronic:* Repeated minor exposure may have a cumulative poisoning effect. The main health effects from repeated exposure would be toxic symptoms of cholinesterase inhibition as described above. Methamidophos was found not to be oncogenic, carcinogenic or teratogenic in animal studies.

**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.**

Swallowed: If swallowed, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly. Do not attempt to give anything by mouth to a semi-conscious or unconscious person.

Eye: Immediately rinse eyes thoroughly, including under eyelids, with running water for at least 15 minutes. Obtain medical attention.

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## HEALTH HAZARD INFORMATION – continued

- Skin:** Remove any contaminated clothing immediately (take care to protect yourself from contamination) and wash skin thoroughly. If poisoned by skin absorption, give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly. Do not attempt to give anything by mouth to a semi-conscious or unconscious person.
- Inhaled:** Remove from the source of vapour or spray to open space or fresh air, and give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly. Do not attempt to give anything by mouth to a semi-conscious or unconscious person.
- First Aid Facilities:** Ensure washing facilities are available. Obtain an emergency supply of atropine tablets 0.6 mg.
- Advice to Doctor:** This product contains the organophosphorus pesticide, methamidophos, which is a cholinesterase inhibitor. After basic aid and decontamination procedures, administer atropine sulfate in large therapeutic doses. In mild cases, start treatment by giving 1-2 mg of atropine intravenously every 15 minutes until signs of atropinisation appear (dry mouth, flushing, and dilated pupils if pupils were originally pinpoint). In severe cases, start treatment by giving 2-4 mg intravenously every 5-10 minutes until fully atropinised. Dosages for children should be appropriately reduced. 2-PAM is also antidotal and may be used in conjunction with atropine. Do not give morphine. Watch for pulmonary oedema, which may develop in serious cases of poisoning even after 24 hours. At first signs of pulmonary oedema, place patient in an oxygen tent and treat symptomatically. Delayed neurological problems have been reported several weeks after large exposures to organophosphates.
- Production workers and agricultural workers handling this product should be monitored for cholinesterase levels. A baseline level should be established prior to any potential exposure.

## PRECAUTIONS FOR USE

- Exposure Standards:** No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia) for any components of this product.
- Engineering Controls:** Control process conditions to avoid contact. Use local exhaust ventilation while handling. Use only in well-ventilated areas.

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## PRECAUTIONS FOR USE - continued

Personal Protection: **Product is very dangerous, particularly the concentrate.** Product and spray are poisonous if absorbed by skin contact or inhaled or swallowed.

Eyes: Safety goggles or face shield.

Clothing: Protective waterproof clothing, impervious footwear and a washable hat.

Gloves: Elbow-length PVC gloves.

Respiratory: Do not breathe vapour or spray. Wear a full facepiece respirator with combined dust and gas cartridge.

Other: If clothing becomes contaminated with product or wet with spray, remove it immediately. If product or spray on skin, immediately wash area with soap and water. 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, safety goggles or face shield, respirator (if rubber wash with detergent and warm water) and contaminated clothing.

Monitor must not be used in glasshouses or other confined spaces.

Flammability: Combustible liquid, Class C1 - flashpoint between 61° C and 150° C.

## SAFE HANDLING INFORMATION

### Storage and Transport:

Corrosivity Hazards: The material is corrosive to metals, such as mild steel and copper alloys.

### Handling & Storage Precautions:

Keep out of reach of children. Product is very dangerous, particularly the concentrate. Product and spray are poisonous if absorbed by skin contact or inhaled or swallowed. Avoid contact with eyes, skin and clothing. Do NOT inhale spray mist. 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 or place away from children, animals, food, feedstuffs, seed and fertilisers. Avoid excessive heat and open flames.

### Transport:

The product is classified as a Dangerous Good, Class 6.1, Toxic, Packing Group II under the Australian Code for the Transport of Dangerous Goods by Road and Rail. *See page 1.* For shipment by sea it is a Marine Pollutant.

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## SAFE HANDLING INFORMATION - continued

### Spills and Disposal:

Spillage or Leak  
Procedures:

Isolate area, alert and evacuate all persons from the immediate area. Personnel involved in cleanup should wear protective clothing and equipment as in Personal Protection section above. Obtain assistance from emergency services if needed. Eliminate ignition sources. Prevent spilled material from entering drains or watercourses. Contain spill and remove with liquid binding material (e.g. sand, soil or diatomaceous earth), collect and store in drums. Seal and label drums for safe disposal. Do not smoke, eat or drink during the cleanup process. Wash the contaminated area with water and detergent. Discard any heavily contaminated clothing or cleaning items – place in plastic bag and put into the drums for disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses etc. is unavoidable, warn the local water authority. Decontaminate tools and equipment used in the cleanup. Hydrated lime may be used to neutralise the chemical.

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:

Foam, dry agent, carbon dioxide, sand, water.

Special Fire Fighting  
Procedures:

Combustible liquid. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1716), as this is a highly toxic product with toxic decomposition products produced in a fire. Keep unnecessary people away. Isolate hazard area and deny entry. Evacuate residents who are downwind of the fire. Bund area to prevent contamination of water sources. Dispose of fire control extinguishing agent and spillage later.

Reactivity Hazards:

Hazardous decomposition products include mercaptans, disulfates, thioethers. Incompatible with strong oxidisers – dangerous reactions are possible. Corrosive to mild steel and copper alloys. Avoid high temperatures and excessive exposure to light. Normal combustion forms carbon dioxide and water and may produce oxides of sulphur,

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nitrogen and phosphorus. In a fire, the formation of hydrogen cyanide, carbon monoxide, phosphorus pentoxide, sulphur dioxide and nitrogen oxides can be expected.

## OTHER INFORMATION:

Toxicology (methamidophos):	Oral LD <sub>50</sub> (mg/kg)	20	Species	Rat
	Dermal LD <sub>50</sub> (mg/kg)	118	Species:	Rabbit
	Inhalation LC <sub>50</sub> (mg/L)	0.2 (4 h)	Species:	Rat
	Eye irritation	Irritating	Species:	Rabbit
	Skin irritation	Slightly irritating	Species:	Rabbit
	Sensitisation	Not a sensitiser	Species:	Guinea pig

Environmental /  
Ecological Effects  
(methamidophos):

Dangerous to fish, aquatic organisms, birds and bees.  
*Fish toxicity:*  
LC<sub>50</sub> (96 h) rainbow trout 40 mg/L; golden orfe 47.7 mg/L  
*Bird toxicity:*  
LD<sub>50</sub> bobwhite quail 8 - 11 mg/kg; mallard ducks 29.5 mg/kg  
*Other:*  
Daphnia EC<sub>50</sub> (48 h) 0.27 mg/L  
Growth rate IC<sub>50</sub> (72 h) green algae > 178 mg/L

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

Special Precautions /  
Comments: May react with strong oxidising materials.

Data Sources /  
References: Bayer product safety data and published data

## CONTACT POINT:

Emergency Contact Number: 1800 033 111 (SHE Pacific)  
Development Manager: (03) 9248 6888

This MSDS summarizes 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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