

MATERIAL SAFETY DATA SHEET



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STATEMENT OF HAZARDOUS NATURE

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

R22 - Harmful if swallowed.

R38 - Irritating to skin.

R41 - Risk of serious damage to eyes.

COMPANY DETAILS:

Company: Bayer CropScience Pty Ltd A.B.N. 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:	Ethrel® Growth Regulator
Other Names:	None assigned
Manufacturer's Product Code:	Not available
SAP Product Code:	16937 (1 L), 16919 (5 L), 16920 (20 L)
UN Number:	3265
Dangerous Goods Class and	8
Subsidiary Risk:	No subsidiary risk
Hazchem Code:	2X
Proper Shipping Name:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains ethephon)
Packing Group:	III
EPG:	36 – Dangerous Goods – Initial Emergency Response Guide
Chemical Family:	Ethylene generator
Poisons Schedule Number:	6
Use:	For thinning, loosening or ripening in various crops.

Physical Description/Properties:

Appearance:	A clear colourless to pale yellow liquid with a mild characteristic odour
Boiling Point:	Decomposes above 75°C
Vapour Pressure:	<0.01 mPa at 20°C
Specific Gravity:	1.207 at 20°C
Flashpoint:	Non flammable
Flammability Limits:	Not determined
Solubility in Water:	100%

Other Properties:

Formulation	Soluble liquid
pH:	Approximately 1.0

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Ingredients:

Chemical Name:	CAS Number:	Proportion g/L:
Ethephon	[16672-87-0]	480
Other ingredients, including water	(non-hazardous)	727

HEALTH HAZARD INFORMATION

Health Effects:

Acute:

Swallowed: Product is harmful if swallowed. May cause burns to mouth, throat, esophagus and stomach.

Eye: Attacks the eyes. Contact can cause corneal burns.

Skin: Contact with skin may result in irritation. Corrosive to skin – may cause skin burns. Studies indicate this product is not a sensitising agent.

Inhaled: Harmful if inhaled. May cause respiratory tract irritation.

Other Health Effects: Ethephon is a weak to moderate cholinesterase inhibitor. Repeated minor exposure may have a cumulative poisoning effect.

Chronic: In animal studies ethephon was shown not to be carcinogenic or mutagenic, and did not cause reproductive or teratogenic effects.

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, DO NOT induce vomiting. Give a glass of water. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. Get to a doctor or hospital quickly.

Eye: If in eyes, hold eyes open and flood with water for at least 15 minutes, and obtain immediate medical assistance.

Skin: Remove contaminated clothing. Wash affected areas with plenty of soap and water. 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.

First Aid Facilities: Ensure washing facilities are available, including eyewash facilities. Maintain a supply of atropine tablets 0.6 mg.

Advice to Doctor: This material possesses the characteristics of a strong acid and may cause mucosal damage by swallowing or inhaling. Victims of severe

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over-exposure by inhalation should be kept under medical observation for up to 72 hours in case of delayed onset of pulmonary edema. In a patient with severe over-exposure by ingestion, careful gastric lavage is required due to the possibility of stomach or esophageal perforation. This material is an acid, but the use of alkaline substances to neutralise it is contraindicated. This product can produce mild cholinergic symptoms due to its cholinesterase inhibiting effect. Treat symptoms.

Other First Aid: DO NOT attempt to give anything by mouth to a semi-conscious or unconscious person.

PRECAUTIONS FOR USE

Exposure Standards: No occupational exposure standards have been established for the product or its ingredients.

Engineering Controls: Control process conditions to avoid contact. Use in a well-ventilated area only. Consider mechanical ventilation.

Personal Protection:

Eyes:	Attacks the eyes. Protect eyes while using. Wear face shield or goggles.
Clothing:	Wear full-length work clothes.
Gloves:	Wear elbow-length PVC gloves.
Respiratory:	Do not breathe vapour or spray. Wear an organic cartridge respirator if inhalation is possible.
Other:	After each day's use, wash gloves, face shield or goggles, respirator if worn, and contaminated clothing.

Flammability: Non flammable.

Other Use Precautions: To be used strictly in accordance with label instructions.

SAFE HANDLING INFORMATION

Storage and Transport:

Corrosivity Hazards: Corrosive to the skin and eyes. Highly corrosive to metals.

Handling & Storage Precautions: Keep out of reach of children. Store in the closed, original container in a cool, well-ventilated area, out of direct sunlight, away from food, feedstuffs, seed and fertilisers. Store below 75°C. DO NOT store in carbon steel. Wear protective equipment if handling opened or leaking containers. Ensure that no metal is in contact with product during short-term or long-term storage, e.g. taps on flexible couplings.

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SAFE HANDLING INFORMATION – continued

Transport: The product is classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (contains ethephon), Class 8, PG III, UN 3265. Must be stored and transported according to local State/Territory and Federal regulations.

Spills and Disposal:

Spillage or Leak
Procedures:

Dealing with spills and disposals may result in the potential for increased personal exposure. During such operations it is recommended that the following protective clothing is worn:

- * Cotton overalls buttoned to the neck and wrist
- * Elbow-length PVC gloves
- * Face shield or goggles

CONTAIN SPILL and absorb with absorbent material such as earth, sand or clay and store in properly labelled, sealed drums for safe disposal in an approved landfill, or bury under at least 500 mm of soil in a non-crop, non-pasture area away from water sources or homes. Do not burn empty containers or product. Deal with all spillages immediately. Keep people away and upwind. If contamination of drains, streams, watercourses, etc. is unavoidable, warn local water authority.

Waste Disposal Methods: Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on-site. Break, crush or puncture and bury empty containers in local authority landfill. If not available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers or product should not be burnt.

Fire/Explosion Hazard:

Extinguishing Media:

Water spray, carbon dioxide, foam, dry agent

Special Fire Fighting
Procedures:

Firefighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715, 1716). If possible and without risk, remove intact containers from exposure to fire. Otherwise, spray unopened containers with water to keep cool. Contain fire-fighting water by bunding area with sand or earth to prevent it entering any bodies of water.

Reactivity Hazards:

Stable under normal conditions of use. Avoid temperatures above 75°C.

Incompatible with strong oxidising agents and alkaline materials. Corrosive to metals such as iron, aluminium and copper. Reaction with bases causes evolution of ethylene gas. Thermal decomposition products may be hazardous - these may include oxides of carbon, oxides of phosphorus, hydrogen chloride.

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Other Safe Handling: Neutralizing chemicals: Not appropriate

OTHER INFORMATION:

Acute toxicity data:	Oral LD ₅₀ (mg/kg)	4229	Species	Rat
	Dermal LD ₅₀ (mg/kg)	5730	Species:	Rabbit
	Inhalation LC ₅₀ (mg/L) (4 h)	> 5.37	Species:	Rat
	Skin irritation	Irritating	Species:	Rabbit
	Eye irritation	Moderate to highly irritant	Species:	Rabbit
	Sensitising potential	Not sensitising	Species:	Guinea pig

Environmental / Ecological Effects: (technical ethephon) Harmful to aquatic life. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.
LC₅₀ (96 h) for carp >140 mg/L
LC₅₀ (96 h) for rainbow trout 720 mg/L
EC₅₀ Daphnia (48 hr) 577.4 mg/L
Low toxicity in birds.
Acute oral LD₅₀ for bobwhite quail 1072 mg/kg
Low hazard to bees.
Non-toxic to earthworms.
Ethephon is rapidly degraded in soil.

Special Precautions / Comments: Ensure application equipment is thoroughly cleaned and scrubbed after using this product to avoid corrosion.

Data Sources / References: Bayer CropScience Pty Ltd product safety data

CONTACT POINT:

Emergency Contact Number: 1800 033 111 (Orica SH&E Shared Services)
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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