SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name	Prep® 720 Growth Regulator
Other names	none
Product code (UVP)	05927773
Chemical Group	ethylene generator
Recommended use	Growth regulator
Chemical Formulation	Soluble concentrate (SL)
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)	R20/21 - Harmful by inhalation and in contact with skin. R34 - Causes burns.
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
Ethephon 720 g/l

Chemical Name	CAS-No.	Concentration [%]
Ethephon	16672-87-0	55.40
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.

General advice
Remove contaminated clothing immediately and dispose of safely. When symptoms develop and persist, seek medical advice.

Inhalation
Move the victim to fresh air and keep at rest. Call a physician or poison control center immediately.

Skin contact
Take off contaminated clothing and shoes immediately. Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. Call a physician or poison control center immediately.

Eye contact
Hold eye open and rinse slowly and gently with water for 15-20 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. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Notes to physician

Symptoms
Local:, Burns on skin and mucosal tissues

Symptoms
Systemic:, Gastro-intestinal irritation, This product causes reversible cholinesterase inhibition without long term effects.

Risks
Must NOT be confused with organophosphorus compounds!

Treatment
There is no specific antidote.
Treat symptomatically.
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.
Contraindication: atropine.
Contraindications: oximes (pralidoxime, obidoxime).

SECTION 5. FIRE FIGHTING MEASURES

Suitable extinguishing media
Water spray
Foam
Carbon dioxide (CO2)
Dry powder

Hazards from combustion products
In the event of fire the following may be released:
Carbon monoxide (CO)
Nitrogen oxides (NOx)
Oxides of phosphorus
Hydrogen chloride (HCl)

Precautions for fire-fighting

Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat.
Keep out of smoke.
Fight fire from upwind position.
Evacuate personnel to safe areas.
Whenever possible, contain fire-fighting water by diking area with sand or earth.
Do not allow run-off from fire fighting to enter drains or water courses.

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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Sweep up or vacuum up spillage and collect in suitable container for disposal.
Collect and transfer the product into a properly labelled and tightly closed container.
Dike area to prevent runoff.

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

Contact with eyes and skin must be avoided.
After each day's use, wash gloves, face shield or goggles and contaminated clothing.
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove soiled clothing immediately and clean thoroughly before using again.

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.
Keep away from direct sunlight.
Protect from frost.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Biological limit values

none

Components with workplace control parameters

Not established.

Personal protective equipment - End user

General advice	Eye wash facility and safety shower should be available.
Respiratory protection	AS/NZS 1715/1716 approved respirator Use respiratory protection for organic vapours.
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

Engineering Controls

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Liquid
Colour	colourless to light brown
Odour	mild, characteristic

Safety data

pH	0.5 at 100 % Determined in the undiluted form.
Flash point	not applicable
Ignition temperature	no data available
Upper explosion limit	no data available
Lower explosion limit	no data available
Vapour pressure	no data available
Relative vapour density	no data available
Density	ca. 1.30 g/cm³ at 20 °C
Water solubility	soluble
Partition coefficient: n-octanol/water	log Pow: -2.2 at 25 °C The value mentioned relates to the active ingredient.

Other information	Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to avoid	Elevated temperatures freezing
Materials to avoid	Bases
Materials to avoid	Zinc Iron Copper Strong oxidizing agents Mild steel Aluminium Chlorates
Hazardous Decomposition Products	Thermal decomposition can lead to release of: Carbon monoxide Carbon dioxide (CO2) Hydrogen chloride (HCl) Oxides of phosphorus
Hazardous Decomposition Products	No decomposition products expected under normal conditions of use.
Thermal decomposition	170 °C
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions. Corrosive to metals Risk of ethylene emission in case of increasing pH.

SECTION 11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Inhalation	Mists may cause upper respiratory tract irritation, coughing, sore throat. May be harmful if inhaled. Avoid breathing spray mist.
Skin	Severe skin irritation. Causes burns. Causes redness, swelling. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing.
Eye	Corrosive - causes irreversible eye damage. Liquid or vapor may cause irritation, burns, corneal opacity. Do not get in eyes.
Ingestion	May cause burns to mouth and esophagus, chest pain, abdominal pain. Harmful if swallowed.
Chronic exposure	This product or its components may have target organ effects.

Acute oral toxicity	LD50 (rat) 2,210 mg/kg The value mentioned relates to the active ingredient ethephon.
Acute inhalation toxicity	LC50 (rat) > 4.5 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. The value mentioned relates to the active ingredient ethephon.
Acute dermal toxicity	LD50 (rabbit) 1,390 mg/kg The value mentioned relates to the active ingredient ethephon.
Skin irritation	Severe skin irritation. (rabbit) The value mentioned relates to the active ingredient ethephon.
Eye irritation	corrosive (rabbit) The value mentioned relates to the active ingredient ethephon.
Sensitisation	Non-sensitizing. (guinea pig) The value mentioned relates to the active ingredient ethephon.
Chronic toxicity	Ethephon did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity
Ethephon was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity
Ethephon was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment Toxicity to Reproduction
Ethephon did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity
Ethephon did not cause developmental toxicity in rats and rabbits.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) > 100 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient ethephon.
Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) > 721 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient ethephon.
Toxicity to aquatic plants	EC50 (Scenedesmus subspicatus) 56 mg/l Exposure time: 72 h Test conducted with a similar formulation.

Toxicity to aquatic plants	EC50 (Chlorella vulgaris (Fresh water algae)) 29 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient ethephon.
Toxicity to other organisms	LD50 (Colinus virginianus (Bobwhite quail)) 1,072 mg/kg The value mentioned relates to the active ingredient ethephon.
Biodegradability	Readily biodegradable. The value mentioned relates to the active ingredient ethephon.
Biodegradability	Not applicable for this mixture.
Stability in soil	. It has a low potential for leaching into groundwater or moving to deeper soil layers. The value mentioned relates to the active ingredient ethephon.
Bioaccumulation	no data available
Additional Environmental Information	no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Refillable containers:
Empty contents fully into application equipment. Close all valves and return to point of purchase. Refer to product label for further information.
Metal drums and plastic containers:
Triple or preferably pressure rinse containers 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.

SECTION 14. TRANSPORT INFORMATION

ADG

UN number	**3265**
Class	8
Subsidiary Risk	None
Packaging group	III
Description of the goods	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON SOLUTION)
Hazchem Code	2X

IMDG

UN number	**3265**
Class	8
Subsidiary Risk	None
Packaging group	III
EmS	F-A , S-B
Marine pollutant	NO
Description of the goods	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON SOLUTION)

IATA

UN number	**3265**
Class	8
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	NO
Description of the goods	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 42096

See also Section 2.

SECTION 16. OTHER INFORMATION

Trademark information Prep® 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