


**ETHREL<sup>®</sup> brand Ethephon Plant Regulator**

MSDS Version .

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

<b>Product Name</b>	ETHREL <sup>®</sup> brand Ethephon Plant Regulator
<b>Chemical Name</b>	Ethephon
<b>Synonym</b>	
<b>MSDS Number</b>	267
<b>Chemical Family</b>	
<b>Chemical Formulation</b>	C <sub>2</sub> H <sub>6</sub> ClO <sub>3</sub> P
<b>EPA Registration No.</b>	264-267
<b>Canadian Registrat. No.</b>	

Bayer CropScience  
 2 T.W. Alexander Drive  
 Research Triangle PK, NC 27709  
 USA

For Product Use Information: (866)-992-2937 Monday through Friday(CRLF) 8:00AM-4:30PM(CRLF) For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day(CRLF) For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

**Product Use Description** FIFRA regulated use only.

**SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS**

	<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
			<u>Minimum</u>	<u>Maximum</u>
	ETHEPHON ((2-CHLOROETHYL) PHOSPHONIC ACID)	16672-87-0	21.7000	
	Other ingredients (Trade secret)		78.3000	

**SECTION 3. HAZARDS IDENTIFICATION**

*NOTE: Please refer to Section 11 for detailed toxicological information.*

<b><u>Emergency Overview</u></b>	Danger! Keep out of the reach of children. Hazard to humans and domestic animals.
<b>Physical State</b>	liquid
<b>Odor</b>	neutral
<b>Appearance</b>	clear
<b>Immediate Effects</b>	
<b>Eye</b>	Corrosive - causes irreversible eye damage. Do not get in eyes.

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<b>Skin</b>	Harmful if absorbed through the skin. Do not get on clothing. Avoid contact with skin.
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Do not inhale vapors as this product will irritate mucous membranes.
<b>Chronic or Delayed Long-Term</b>	This product does not contain any ingredients designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens. Prolonged contact can cause chronic bronchitis.
<b>Medical Conditions Aggravated by Exposure</b>	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

### SECTION 4. FIRST AID MEASURES

<b>Eye</b>	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 poison control center or doctor for treatment advice.
<b>Skin</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
<b>Ingestion</b>	Immediately call a poison control center or doctor for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Have a person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.
<b>Inhalation</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
<b>Note to Physician</b>	<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment.</p> <p>Probable mucosal damage may contraindicate the use of gastric lavage. There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.</p> <p>Victims of severe overexposure by inhalation should be kept under medical observation for up to 72 hours for delayed onset of pulmonary edema. In a victim of overexposure 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 neutralize it is contraindicated.</p>

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### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash Point</b>	Not applicable
<b>Fire and Explosion Hazards</b>	Under fire conditions, toxic, corrosive fumes are emitted.
<b>Suitable Extinguishing Media</b>	Not combustible., Use extinguishing method suitable for surrounding fire.
<b>Fire Fighting Instructions</b>	Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Dike areas to prevent runoff and contamination of water sources. Dispose of fire control water later.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

<b>General and Disposal</b>	<p>Evacuation Procedures and Safety: Wear appropriate gear for the situation. See Personal Protection information in Section 8.</p> <p>Cleanup and Disposal of Spill: Pump any free liquid into an appropriate closed container. Soak up with inert absorbent material. Sweep up and place in an appropriate closed container (see Section 7: Handling and Storage). Clean up residual material by washing area with water. Collect washings for disposal. Decontaminate tools and equipment following cleanup.</p>
<b>Land Spill or Leaks</b>	<p>Containment of Spill: Dike spill using absorbent or impervious materials such as earth, sand or clay. Follow procedure under Cleanup and Disposal of Spill.</p> <p>Environmental and Regulatory Reporting: Do not flush to drain. If spilled on the ground, the affected area should be removed to a depth of one or two inches and placed in an appropriate container for disposal. Prevent material from entering public sewer system or any waterway.</p>

### SECTION 7. HANDLING AND STORAGE

<b>Handling Procedures</b>	Do not get on skin or in eyes. Avoid breathing vapors and mists. Do not ingest. Avoid getting material on clothing. Do not contaminate water sources, food or feedstuffs when disposing of left-over material.
<b>Storing Procedures</b>	Store in an area away from food, feedstuffs, fertilizers, seed and water sources. Do not contaminate water, food, or feed by storage or disposal.
<b>Work/Hygienic Procedures</b>	<p>Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.</p> <p>Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Wash contaminated clothing before reuse.</p>

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Remove Personal Protective Equipment (PPE) immediately after handling this product. Then wash thoroughly and put on clean clothing. Wash the outside of gloves before removing.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours. Do not apply this product through any type of irrigation system. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### Min/Max Storage Temperatures

Not Available

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Controls

Where engineering controls are indicated by use conditions of a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures:

When handlers used closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### Eye/Face Protection

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Face contact should be prevented through use of a face shield.

### Body Protection

Skin contact must be prevented through use of permeation resistant clothing, gloves and footwear, selected with regard for use conditions and exposure potential. Consideration must be given both to durability as well as permeation resistance. An emergency shower must be readily accessible to the work area.

Applicators and other handlers must wear: Long-sleeved shirt and long pants chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride. shoes plus socks protective eyewear.

### Respiratory Protection

When respirators are required, select NIOSH/MSHA approved equipment based

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on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridge/canister approved for use against dusts, mists and fumes, pesticides.

Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.

### General Protection

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

### Exposure Limits

None Established

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	clear
<b>Physical State</b>	liquid
<b>Odor</b>	neutral
<b>pH</b>	1.9 at 1 wt/wt%.
<b>Vapor Pressure</b>	<< 0.01 mmHg at 25 °C
<b>Vapor Density (air = 1)</b>	Not available
<b>Specific Gravity</b>	1.106 at 25 °C

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<b>Boiling Point</b>	Not available
<b>Melting/Freezing Point</b>	-5.0 °C
<b>Solubility (in water)</b>	100 wt/wt% at 25 °C soluble
<b>Molecular Weight</b>	144.5 g/mol
<b>Decomposition Temperature</b>	170 °C
<b>Other Information</b>	Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

### SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	This material is stable under normal handling and storage conditions described in Section 7.
<b>Conditions to Avoid</b>	elevated temperatures extreme humidity
<b>Incompatibility</b>	zinc iron copper strong oxidizing agents bases mild steel aluminum
<b>Hazardous Products of Decomposition</b>	Decomposition Type: thermal hydrogen chloride carbon oxides

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**Hazardous Polymerization (Conditions to avoid)** not applicable

### SECTION 11. TOXICOLOGICAL INFORMATION

**Acute Oral Toxicity** Rat: LD50: > 5,000 mg/kg  
**Acute Dermal Toxicity** Rabbit: LD50: > 2,000 mg/kg  
**Acute Inhalation Toxicity** No test data found for product.  
**Skin Irritation** Rabbit: Minimally Irritating  
**Eye Irritation** Rabbit: Moderately irritating  
**Chronic Toxicity** No additional test data found for product.

#### Assessment Carcinogenicity

**ACGIH**

None

**NTP**

None

**IARC**

None

**OSHA**

None

### SECTION 12. ECOLOGICAL INFORMATION

**Environmental Precautions** Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.  
  
Avoid spray drift. Do not apply when weather conditions may cause drift. Do not allow this product to drift on to non-target areas. To avoid spray drift, DO NOT apply aerially when wind speed is greater than 10 mph or during periods of temperature inversions.

**Ecological Information** For ecotoxicological data call the product information phone number listed in Section 1.

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**Environmental Fate** For chemical fate data call the product information phone number listed in Section 1.

### SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal Guidance** Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

EPA Hazardous Waste - Yes  
EPA RCRA HAZARDOUS WASTE CODES: C Corrosive.

**RCRA Classification** Not Regulated under this Statute

### SECTION 14. TRANSPORT INFORMATION

For Transportation Regulatory Information call the Product Information phone number in Section 1.

### SECTION 15. REGULATORY INFORMATION

#### US Federal

**EPA Registration No.** 264-267

**TSCA list**

None

**TSCA 12b export notification**

None

**SARA Title III - section 302 - notification and information**

None

**SARA Title III - section 313 - toxic chemical release reporting**

None

#### US States Regulatory

**CA Prop65**

This product does not contain any substances known to the State of California to cause cancer.

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This product does not contain any substances known to the State of California to cause reproductive harm.

### US State right-to-know ingredients

None

### Canadian Regulations

Canadian Registrat. No.

Canadian Domestic Substance List

None

### Environmental

CERCLA

None

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

None

### International Regulations

EU Classification

None

European Inventory of Existing Commercial Substances (EINECS)

ETHEPHON ((2-CHLOROETHYL) PHOSPHONIC ACID) 16672-87-0

## SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	2	1	0	
NFPA	2	1	0	

Reason for Revisions: New Company Name and changes made according to EPA approved label.

Print Date: 12/19/2002

Supersedes MSDS, which is older than: 12/18/2002

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