

MATERIAL SAFETY DATA SHEET

FLOREL® BRAND GROWTH REGULATOR

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Issue Date: 09/13

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical Product

FLOREL® BRAND GROWTH REGULATOR

EPA Reg. No. 54705-8

Common Name: Ethephon ((2-chloroethyl) phosphonic acid).

Chemical Description: Liquid plant growth regulator.

TSCA/CAS No.: The primary CAS No. is 16672-87-0

Manufactured For

Lawn and Garden Products, Inc.

P. O. Box 35000

Fresno, CA 93745-5000

Emergency Phone Numbers

Emergency Telephone: DAYS: (559) 499-2100 EVES.: (559) 994-9144

CHEMTREC (24-Hour Emergency Number): (800) 424-9300

EPA National Response Center: (800) 424-8802

SECTION 2. HAZARDOUS INGREDIENTS

CHEMICAL	CAS NO.	%	TLV OR PEL	RQ (lbs)
Ethephon ((2-chloroethyl)-Phosphonic Acid)	16672-87-0	3.9	N.A.*	N.P.*

* N.A. - Not Available.

* N.P. - Not Pertinent.

SECTION 3. EMERGENCY/HAZARDS OVERVIEW

Colorless clear liquid with no odor. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Corrosive to metals such as iron, aluminum and copper. Thermal decomposition products may include hydrogen chloride. Not D.O.T. regulated.

HEALTH: 1 REACTIVITY: 0 FLAMMABILITY: 0 ENVIRONMENT: 1
(0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme)

SECTION 4. FIRST AID

Eyes: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Get medical attention.

Skin: Immediately wash skin with plenty of soap and water for at least 15 minutes. Seek medical attention. Remove contaminated clothing and shoes while washing. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned.

Ingestion: If victim is conscious and alert, give 2-3 glasses of water to drink. Do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If the vomiting occurs and the victim is conscious, give water to further dilute the chemical.

SECTION 4. FIRST AID (continued)

Inhalation: Move to fresh air. If not breathing give artificial respiration. Administer oxygen if necessary. Get medical attention.

Medical Conditions Possibly Aggravated by Exposure:

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

Notes to Physician:

All treatment should be based on observed signs and symptoms of distress in the patient.

Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. No specific antidote is available.

The primary toxicity of this product is due to its irritant properties on mucosal surfaces.

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 patient 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 is contraindicated.

SECTION 5. FIRE AND EXPLOSION HAZARDS

Flash Point:	Not applicable.
Test Method:	Not available.
LEL Flammable Limits:	None.
UEL Flammable Limits:	None.
Autoignition Temperature:	None.
Flammability Classification:	None.
Known Hazardous Products of Combustion:	Noncombustible.
Properties that Initiate/Contribute to Intensity of Fire:	Not known.
Potential For Dust Explosion:	None.
Reactions that Release Flammable Gases or Vapors:	Not known.
Potential For Release of Flammable Vapors:	None.
Unusual Fire & Explosion Hazards:	Under fire conditions, toxic, corrosive fumes are emitted.
Extinguishing Media:	Not combustible. Use extinguishing method suitable for surrounding fire.
Special Firefighting Procedures:	Firefighters should use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Contain liquid runoff to prevent contamination of water sources. Dispose of fire control water later.

SECTION 6. SPILLS AND LEAKS

Containment: Prevent product spillage from entering drinking water supplies or streams.

Clean Up: Collect liquid or absorb onto absorbent material and package for disposal.

Evacuation: Not necessary.

SECTION 7. STORAGE AND HANDLING

Storage:	Store in plastic or stainless steel containers in a cool, well-ventilated, dry place at temperatures above 40°F. Do not store near food, feedstuffs, fertilizers and seed. Do not stack pallets more than two (2) high.
Transfer Equipment:	Transfer product using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc.
Work/Hygienic Practices:	Keep out of reach of children. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wear long-sleeved shirt and long pants, chemical resistant gloves made of any waterproof material and shoes plus socks. Wash thoroughly with soap and water after handling. Wash clothing separately from other laundry. Do not allow people (other than applicator) or pets on treatment area during application. Do not allow people or pets to touch treated plants until sprays have dried.

SECTION 8. PERSONAL PROTECTIVE EQUIPMENT

Eyes:	Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.
Skin:	Wear long-sleeved shirt and long pants, chemical resistant gloves (such as Nitrile, Butyl, Neoprene and/or Barrier Laminate), and shoes plus socks.
Respiratory:	Not normally needed. If use generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8710).
Ventilation:	Recommended but no TLV established.

SECTION 9. PHYSICAL AND CHEMICAL DATA

Appearance:	Clear, colorless liquid.
Odor:	Odorless.
pH:	2.6 at 1 wt/wt%.
Vapor Pressure:	Not available.
Vapor Density (Air = 1):	Not available.
Boiling Point:	Not available.
Freezing Point:	-0° C (32° F).
Water Solubility:	Soluble.
Density:	8.47 lbs./gal.
Evaporation Rate:	Not determined.
Viscosity:	Not available.
% Volatile:	Not available.
Octanol/Water Partition Coefficient:	Not available.
Saturated Vapor Concentration:	Not available.

SECTION 10. STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Elevated temperatures.
Incompatibility:	Avoid contact with aluminum, zinc, strong acids, strong bases, strong oxidizing agents and mild steel.
Hazardous Decomposition Products:	Thermal decomposition will result in carbon oxides and hydrogen chloride.

Hazardous Polymerization: Will not occur.

SECTION 11.	POTENTIAL HEALTH EFFECTS
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Acute Effects:

Eyes: Non-irritating to minimally irritating.
 Skin: Non-irritating to minimally irritating. LD₅₀ (Rabbits): > 2,000 mg/kg.
 Ingestion: Can cause stomach irritation, resulting in nausea, cramps and vomiting.
 LD₅₀ - lethal dose 50% of test species, > 20,000 mg/kg, rat. LD₅₀ - lethal dose 50%
 of test species, > 5,000 mg/kg, rat.
 Inhalation: Excessive inhalation may cause nasal and respiratory irritation.

Subchronic Effects: None known.

Chronic Effects: None known.

SECTION 12.	ECOLOGICAL INFORMATION
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Algal/Lemna Growth Inhibition: Not known.
 Toxicity to Fish and Invertebrates: Not known.
 Toxicity to Plants: Not known.
 Toxicity in Birds: Not known.

SECTION 13.	DISPOSAL
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Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents according to state and local regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal. Do not discharge.

SECTION 14.	TRANSPORTATION
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D.O.T.: Not D.O.T. Regulated.
 Other Shipping Description: Inhibitors, Modifiers or Regulators, Plant Growth, Liquid.
 NMFC 101685, LTL Class 65

SECTION 15.	REGULATORY INFORMATION
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CERCLA: None.
SARA TITLE III, Section 313 Toxic Chemicals: None.
PROPOSITION 65 (CA): None.

SECTION 16.	OTHER
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National Fire Protection Association Hazard Rating (NFPA):
 HEALTH: 1 (Slight) REACTIVITY: 0 (Insignificant) FLAMMABILITY: 0 (Insignificant)

All information appearing in this document was based on data provided by third party sources and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act. The information is believed to be accurate as of the preparation date, but is not warranted as being the final authority in the use of this product. This information does not purport to be legal or medical advice.

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