

# Lawn and Garden Products, Inc.

Effective Date: JAN 8, 1990  
Supercedes: JUL 6, 1989

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## M A T E R I A L   S A F E T Y   D A T A   S H E E T

EPA Registration Number: 264-263-54705 OK 7  
264-543-AA-54705 [WPS-1086/0291(04)]

PRODUCT NAME: FLOREL(R) brand FRUIT ELIMINATOR

### 1. IDENTIFICATION

CHEMICAL NAME: (2-Chloroethyl) phosphonic acid

FORMULA: C<sub>2</sub>H<sub>6</sub>ClO<sub>3</sub>P

MOLECULAR WEIGHT: 144.49

SYNONYMS: Ethephon

CAS # & NAME: 16672-87-0 Phosphonic acid, (2-chloroethyl)-

### IMPORTANT HEALTH EFFECT INFORMATION

CAUTION!

MAY BE HARMFUL IF SWALLOWED.

See Section IV for complete Health Hazard Data.

NATIONAL FIRE PROTECTION ASSOCIATION RATING  
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

KEY = NFPA/HMIS	NFPA	HMIS
	Health	
4=Extreme/ Severe	1	1
	Fire	
3=High/ Serious	0	0
	Reactivity	
2=Moderate 1=Slight 0=Minimum	0	0

### RA TITLE III HAZARD CLASSIFICATION

Immediate (acute) Health	YES
Delayed (chronic) Health	NO
Fire	NO
Sudden Release of Pressure	NO
Reactive	NO

# MATERIAL SAFETY DATA SHEET

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## II. HAZARDOUS INGREDIENTS

MATERIAL	WEIGHT %
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(1) Ethephon ((2-Chloroethyl) phosphonic acid)	3.9
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### EXPOSURE LIMITS:

None established

## III. PHYSICAL DATA

SPECIFIC GRAVITY:	1.016 @ 20/20 Degrees C
BOILING POINT, 760 mm Hg, Degrees C (F):	Not known
DECOMPOSITION POINT, Degrees C (F):	170 (338) (ethephon)
FREEZING POINT, Degrees C (F):	-1 (30)
POR PRESSURE, 20 Degrees C:	0.0000605 mm Hg (ethephon)
VAPOR DENSITY (air=1):	Not known
pH:	Not known
SOLUBILITY IN WATER, %/wt @ Degrees C:	100
APPEARANCE AND ODOR:	Colorless, clear liquid; characteristic odor

## IV. HEALTH HAZARD DATA

### TOXICOLOGY DATA:

Oral LD50 (rats): >20,000 mg/kg body weight  
Dermal LD50 (rabbits): >2,000 mg/kg body weight  
Inhalation LC50 (rats): No information available  
Skin Effects (rabbits): Not irritating  
Eye Effects (rabbits): Not irritating

### CARCINOGENICITY, TERATOGENICITY, MUTAGENICITY:

The active ingredient in this product was not mutagenic in "in vitro" or in "in vivo" studies. In addition, the active ingredient has been shown not to be teratogenic or carcinogenic in animal studies. This product does not contain any chemicals listed as carcinogens by IARC, NTP or OSHA.

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IV. HEALTH HAZARD DATA (continued)

EFFECTS OF SINGLE OVEREXPOSURE:

Swallowing:

May be harmful if swallowed. (See TOXICOLOGY DATA)

Skin Absorption:

No evidence of adverse effects from available information.  
(See TOXICOLOGY DATA)

Inhalation:

No information available, but may be slightly irritating to the respiratory tract.

Skin Irritation:

No significant adverse effects are anticipated based on available information. (See TOXICOLOGY DATA)

Eye Contact:

No evidence of adverse effects from available information.

EFFECTS OF REPEATED OVEREXPOSURE:

No adverse effects expected from repeated overexposure except for slight respiratory irritation.

OTHER EFFECTS OF OVEREXPOSURE:

No evidence of additional adverse effects from available information.

EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

Skin irritation may be aggravated in persons with existing skin lesions.  
Breathing of vapor or sprays (mists) may aggravate asthma and other chronic pulmonary disease.

EMERGENCY AND FIRST AID PROCEDURES:

Remove the patient from immediate source of exposure and assure that the individual is breathing. Use artificial respiration if necessary, to assure continued breathing. GET MEDICAL ATTENTION.

Swallowing:

If patient is conscious and alert, give 2-3 glasses of water to drink. Do not induce vomiting. GET MEDICAL ATTENTION.

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IV. HEALTH HAZARD DATA (continued)

Skin:

Immediately wash skin with plenty of soap and water, while removing contaminated clothing and shoes. Shoes and clothing contaminated by substantial spillage of concentrated product should be discarded in a manner which limits further exposure. Otherwise, wash clothing separately before reuse. GET MEDICAL ATTENTION.

Inhalation:

Remove victim to fresh air. If not breathing, give artificial respiration. Administer oxygen if necessary. GET MEDICAL ATTENTION.

Eyes:

Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. GET MEDICAL ATTENTION.

YES TO PHYSICIAN:

No specific antidote is available.

Treat symptomatically. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

The primary toxicity of this product is due to its irritant properties on mucousal 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 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 is contraindicated.

Based on the results of animal studies, this product may cause mild to moderate peripheral cholinesterase inhibition, depending on the degree and duration of exposure. Central nervous system cholinesterase depression has not been observed in any of the animal studies. Signs and symptoms of cholinergic poisoning have not been observed in any of the animal studies. The usefulness of conventional treatment for cholinesterase inhibiting agents, i.e. atropinization, has not been established for this product.

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V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT Degrees C (F): Noncombustible

FLAMMABLE LIMITS IN AIR: None

AUTOIGNITION TEMPERATURE Degrees C (F): None

EXTINGUISHING MEDIA: Not combustible. Use appropriate extinguishing media for material that is supplying fuel.

SPECIAL FIRE FIGHTING PROCEDURES: Wear protective clothing and use self-contained breathing apparatus. Dike area to prevent runoff and contamination of water sources.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Thermal decomposition products may include hydrogen chloride.

VI. REACTIVITY DATA

STABILITY:

Stable

CONDITIONS TO AVOID:

Decomposes at temperatures above 170 Degrees C (338 F).

Decomposes at pH greater than 3.

MATERIALS TO AVOID:

Alkaline materials. Corrosive to metals such as iron, aluminum, and copper.

HAZARDOUS DECOMPOSITION PRODUCTS:

Decomposition products may be hazardous. These may include hydrogen chloride. Reaction with bases causes evolution of ethylene gas.

HAZARDOUS POLYMERIZATION:

Will not occur.

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## VII. SPILL OR LEAK PROCEDURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Dike large spills using absorbent or impervious materials such as sand or clay. Recover and contain as much free liquid as possible.

Recover remaining spilled material as appropriate. Collect and contain contaminated absorbent and dike material for disposal.

Absorb small spills on sand or vermiculite. Place contaminated material in appropriate container for disposal.

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.

Do not flush material to public sewer systems or any waterways.

Wear appropriate protective clothing and equipment (see below) during cleanup activities.

Ensure adequate decontamination of tools and equipment following cleanup.

### WASTE DISPOSAL METHOD:

Dispose of in accordance with local, state and federal regulations.

## VIII. SPECIAL PROTECTION INFORMATION

### PROTECTIVE EQUIPMENT SHOULD BE USED DURING THE FOLLOWING PROCEDURES:

- Manufacture or formulation of this product
- Repair and maintenance of contaminated equipment
- Clean-up of leaks and spills

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved respirator for pesticide mist when handling spills or leaks, or when airborne concentrations are high.

VENTILATION: Mechanical (general) ventilation.

PROTECTIVE GLOVES: Chemical-resistant gloves, eg PVC or neoprene.

EYE PROTECTION: Safety glasses.

OTHER PROTECTIVE EQUIPMENT: Protective clothing.

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## IX. SPECIAL PRECAUTIONS

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Do not swallow. Avoid breathing vapors or spray (mists). Avoid getting in eyes, on skin or on clothing.

Do not store near food, feedstuffs, fertilizers, or seed.  
Do not contaminate water, food, or feed by storage or disposal.

## X. REGULATORY STATUS

RCRA Hazardous Waste: Not listed

### EPA Title III

Section 302 Extremely Hazardous Substance List: Not listed  
Section 313 Toxic Chemicals: Not listed

Reportable Quantity (RQ), under U.S. EPA CERCLA: Not listed

### State's Right-to-Know Laws:

California Proposition 65:	Not listed
Connecticut:	Not listed
Florida:	Not listed
Illinois:	Not listed
Louisiana:	Not listed
Massachusetts:	Not listed
New Jersey:	Not listed
New York:	Not listed
Pennsylvania:	Not listed
Rhode Island:	Not listed

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