

**FLOREL® BRAND GROWTH REGULATOR**1/10  
Revision Date: 08/07/2015**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****Product identifier****Trade name** FLOREL® BRAND GROWTH REGULATOR**EPA Registration No.** 54705-8**Relevant identified uses of the substance or mixture and uses advised against****Use** Growth regulator**Restrictions on use** See product label for restrictions.**Information on supplier****Distributed by** **Lawn and Garden Products, Inc.**  
PO Box 35000  
Fresno, California 93745  
United States**Responsible Department****Emergency telephone no.** (559) 994-9144**Emergency Telephone Number (24hr/ 7 days)** Chemtrec – 1-800-424-9300**Product Information Telephone Number** 1-559-499-2100**SECTION 2: HAZARDS IDENTIFICATION****Classification in accordance with regulation HCS 29CFR §1910.1200**

Eye irritation : Category 2B

Acute toxicity (Inhalation): Category 4

**Signal word:** Warning**Hazard statements**

Causes eye irritation.

Harmful if inhaled.

**Precautionary statements**

Wash thoroughly after handling.

Avoid breathing mist and spray.

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Use only outdoors or in a well-ventilated area.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/ attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

**Other hazards**

No other hazards known.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Component Name	CAS-No.	Concentration % by weight
Ethephon	16672-87-0	3.90

**SECTION 4: FIRST AID MEASURES****Description of first aid measures****General advice**

When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

**Inhalation**

Move 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 physician or poison control center immediately.

**Skin contact**

Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. 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 unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

**Most important symptoms and effects, both acute and delayed****Symptoms**

No symptoms known or expected.

**Indication of any immediate medical attention and special treatment needed****Risks**

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

**Treatment**

Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

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Revision Date: 08/07/2015**SECTION 5: FIREFIGHTING MEASURES****Extinguishing media****Suitable** Water spray, Foam, Carbon dioxide (CO<sub>2</sub>), Dry chemical**Unsuitable** None known.**Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire.**Advice for firefighters****Special protective equipment for fire-fighters** Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.**Further information** Extinguishing measures to suit surroundings. Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.**Flash point** no data available**Autoignition temperature** no data available**Lower explosion limit** no data available**Upper explosion limit** no data available**Explosivity** not applicable**SECTION 6: ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Precautions** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.**Methods and materials for containment and cleaning up****Methods for cleaning up** Recover the product by pumping, suction or absorption using a dry and inert absorbent clay. Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations. Decontaminate tools and equipment following cleanup.**Additional advice** Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.**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.

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**SECTION 7: HANDLING AND STORAGE****Precautions for safe handling**

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Before removing gloves clean them with soap and water. Wash thoroughly and put on clean clothing.

**Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers** Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Ethephon	16672-87-0	1.4 mg/m <sup>3</sup> (OES BCS)		OES BCS*

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**Exposure controls****Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection** When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.  
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.

**Hand protection** Chemical-resistant gloves made of waterproof material such as neoprene, butyl rubber, barrier laminate or nitrile rubber.

**Eye protection** Tightly fitting safety goggles

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<b>Skin and body protection</b>	Wear long-sleeved shirt and long pants and shoes plus socks.
<b>General protective measures</b>	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	colourless to light brown
<b>Physical State</b>	liquid, clear
<b>Odor</b>	none
<b>Odour Threshold</b>	no data available
<b>pH</b>	2.6 at 1 % (23 °C) (as aqueous solution)
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Density</b>	ca. 1.02 g/cm <sup>3</sup> at 20 °C
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	0 °C / 32 °F
<b>Melting / Freezing Point</b>	no data available
<b>Water solubility</b>	soluble
<b>Minimum Ignition Energy</b>	not applicable
<b>Decomposition temperature</b>	170 °C
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	no data available
<b>Flash point</b>	no data available
<b>Autoignition temperature</b>	no data available
<b>Lower explosion limit</b>	no data available
<b>Upper explosion limit</b>	no data available
<b>Explosivity</b>	not applicable

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<b>Thermal decomposition</b>	170 °C
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Elevated temperatures
<b>Incompatible materials</b>	Zinc, Strong bases, Strong acids, Strong oxidizing agents, Mild steel, Aluminium
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

**SECTION 11: TOXICOLOGICAL INFORMATION****Exposure routes** Eye contact, Skin Absorption, Ingestion, Inhalation**Immediate Effects****Eye** Moderate eye irritation.**Skin** Harmful if absorbed through skin.**Information on toxicological effects****Acute oral toxicity** LD50 (rat) > 5,000 mg/kg**Acute inhalation toxicity** LC50 (rat) 4.52 mg/l  
Exposure time: 4 h  
LC50 (rat) 18.08 mg/l  
Exposure time: 1 h  
Extrapolated from the 4 hr LC50.**Acute dermal toxicity** LD50 (rabbit) > 2,000 mg/kg**Skin irritation** No skin irritation (rabbit)**Eye irritation** Minimally irritating. (rabbit)**Sensitisation** Non-sensitizing. (guinea pig)**Assessment repeated dose toxicity**

Ethepon did not cause specific target organ toxicity in experimental animal studies.

**Assessment mutagenicity**

Ethepon was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

**Assessment carcinogenicity**

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

**ACGIH**

None.

**NTP**

None.

**IARC**

None.

**OSHA**

None.

**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.

**Further information**

Only acute toxicity studies have been performed on the formulated product.  
The non-acute information pertains to the active ingredient(s).

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**SECTION 12: ECOLOGICAL INFORMATION****Biodegradability**

Ethephon:  
not rapidly biodegradable

**Koc**

Ethephon: Koc: 2540

**Bioaccumulation**

Ethephon:  
Does not bioaccumulate.

**Mobility in soil**

Ethephon: Slightly mobile in soils

**Environmental precautions**

Do not allow to get into surface water, drains and ground water.  
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 surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water.  
Drift or runoff from treated areas may adversely affect non-target plants.  
Apply this product as specified on the label.

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**SECTION 13: DISPOSAL CONSIDERATIONS****Waste treatment methods**

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<b>Product</b>	Do not contaminate water, food, or feed by disposal. Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility. Dispose in accordance with all local, state/provincial and federal regulations. Follow advice on product label and/or leaflet.
<b>Contaminated packaging</b>	Do not re-use empty containers. Triple rinse containers. Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.
<b>RCRA Information</b>	Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply. When and if this material is determined to be a waste, if discarded, this material will carry RCRA waste code(s) <b>NON-RCRA</b> . State and local laws may vary and must be considered.

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**SECTION 14: TRANSPORT INFORMATION**

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification: Inhibitors, Modifiers or Regulators, Plant Growth, Liquid.  
NMFC 101685, LTL Class 65

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**SECTION 15: REGULATORY INFORMATION**

**EPA Registration No.** 54705-8

**US Federal Regulations**

**TSCA list**

None.

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

None.

**US States Regulatory Reporting**

**CA Prop65**

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

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



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None.

**Canadian Regulations****Canadian Domestic Substance List**

None.

**Environmental****CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**EPA/FIFRA Information:**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

**Signal word:** Caution!**Hazard statements:** Harmful if absorbed through skin.  
Causes eye irritation.  
Avoid contact with skin, eyes and clothing.  
Wash thoroughly with soap and water after handling.

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**SECTION 16: OTHER INFORMATION****Abbreviations and acronyms**

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
CAS-Nr.	Chemical Abstracts Service number
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	US. IARC Monographs on Occupational Exposures to Chemical Agents
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World Health Organization



## SAFETY DATA SHEET

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**NFPA 704 (National Fire Protection Association):**

Health - 2      Flammability - 0      Instability - 0      Others - none

**HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)**

Health - 1      Flammability - 0      Physical Hazard - 0      PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**Reason for Revision:** Revised according to the current OSHA Hazard Communication Standard (29CFR1910.1200)

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