

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

1/11
Revision Date: 05/28/2021
Print Date: 05/29/2021

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name	ETHREL® LIQUID PLANT GROWTH REGULATOR
Product code (UVP)	05927285
SDS Number	102000004255
PCP Registration No.	11580

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	
Supplier	Bayer CropScience Inc #200, 160 Quarry Park Blvd, SE Calgary, Alberta T2C 3G3 Canada
Responsible Department	Email: SDSINFO.BCS-NA@bayer.com
Emergency telephone no.	
Emergency Telephone Number (24hr/ 7 days)	1-800-334-7577
Product Information Telephone Number	1-888-283-6847

SECTION 2: HAZARDS IDENTIFICATION

Classified in accordance with Part 2 of the Hazardous Products Regulations
Serious eye damage: Category 1

Labelling in accordance with Part 3 of the Hazardous Products Regulations



Signal word: Danger

Hazard statements

Causes serious eye damage.

Precautionary statements

Wear eye protection/ face protection.

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

2/11
Revision Date: 05/28/2021
Print Date: 05/29/2021

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor/ physician.

Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Ethephon	16672-87-0	21.7

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	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. 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 To date no symptoms are known.

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.

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

3/11
Revision Date: 05/28/2021
Print Date: 05/29/2021

After oral ingestion of undiluted ethephon, treatment must follow the regimens for acid ingestion. 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.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Water spray, Carbon dioxide (CO₂), Foam, Dry powder

Unsuitable High volume water jet

Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire., In the event of fire the following may be released:, Carbon monoxide (CO), Hydrogen chloride (HCl), Nitrogen oxides (NO_x)

Advice for firefighters

Special protective equipment for firefighters Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

Further information 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 Not relevant; aqueous solution

Auto-ignition temperature No data available

Lower explosion limit No data available

Upper explosion limit No data available

Explosivity No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Use personal protective equipment.

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. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean floors and contaminated objects with plenty of water. Decontaminate tools and equipment following cleanup.

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

4/11

Revision Date: 05/28/2021

Print Date: 05/29/2021

Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
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

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.

Advice on protection against fire and explosion Keep away from heat and sources of ignition.

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. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. 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. Protect from freezing.

Advice on common storage Keep away from food, drink and animal feedingsuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

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

*OES BCS: Internal Bayer AG, Crop Science Division "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

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

5/11
Revision Date: 05/28/2021
Print Date: 05/29/2021

recommendations.

Hand protection

Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)

Eye protection

Use tightly sealed goggles and face protection.

Skin and body protection

Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Liquid
Colour	colourless to brown
Odour	characteristic
Odour Threshold	No data available
pH	ca. 0.8 (100 %) (23 °C) Determined in the undiluted form.
Melting point/freezing point	-5 °C
Boiling Point	No data available
Flash point	Not relevant; aqueous solution
Flammability	No data available
Auto-ignition temperature	No data available
Thermal decomposition	170 °C
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	< 0.013 hPa (25 °C)
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	ca. 1.11 g/cm ³ (20 °C)

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

6/11
Revision Date: 05/28/2021
Print Date: 05/29/2021

Water solubility	soluble
Partition coefficient: n-octanol/water	Ethephon: log Pow: -1.89
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	No data available
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Corrodes metals in the presence of water or moisture. Risk of ethylene emission in case of increasing pH. No dangerous reaction known under conditions of normal use.
Conditions to avoid	Exposure to moisture. Heat, flames and sparks.
Incompatible materials	Zinc, Iron, Copper, Strong oxidizing agents, Bases, Mild steel, Aluminium
Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Eye contact, Skin contact, Ingestion, Inhalation
Immediate Effects	
Eye	Corrosive - causes irreversible eye damage.
Skin	Harmful if absorbed through skin.
Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled. May cause irritation of the mucous membranes.
Information on toxicological effects	
Acute oral toxicity	LD50 (male/female combined Rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (male/female combined Rat) 4.5 mg/l Exposure time: 4 h Determined in the form of liquid aerosol.

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

7/11
Revision Date: 05/28/2021
Print Date: 05/29/2021

	(actual) The value mentioned relates to the active ingredient.
Acute dermal toxicity	LD50 (male/female combined Rabbit) > 2,000 mg/kg
Skin corrosion/irritation	Moderate skin irritation. (Rabbit)
Serious eye damage/eye irritation	corrosive (Rabbit)
Respiratory or skin sensitisation	Skin: Non-sensitizing. (Guinea pig) The value mentioned relates to the active ingredient.

Assessment STOT Specific target organ toxicity – single exposure

Ethephon: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

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.

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.

Aspiration hazard

Based on available data, the classification criteria are not met.

Further information

Acute toxicity studies have been bridged from a similar formulation(s).
The non-acute information pertains to the active ingredient(s).

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

8/11

Revision Date: 05/28/2021

Print Date: 05/29/2021

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 720 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient ethephon.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) > 1,000 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient ethephon.
Toxicity to aquatic plants	EC50 (Raphidocelis subcapitata (freshwater green alga)) 13 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient ethephon.
	EC50 (Lemna gibba (gibbous duckweed)) > 1.6 mg/l Exposure time: 14 d The value mentioned relates to the active ingredient ethephon.
	EC10 (Lemna gibba (gibbous duckweed)) 0.21 mg/l The value mentioned relates to the active ingredient ethephon.
Biodegradability	Ethephon: Not rapidly biodegradable
Koc	Ethephon: Koc: 2540
Bioaccumulation	Ethephon: Does not bioaccumulate.
Mobility in soil	Ethephon: Slightly mobile in soils
Results of PBT and vPvB assessment	
PBT and vPvB assessment	Ethephon: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No other effects to be mentioned.
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 surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Dispose in accordance with all local, state/provincial and federal
----------------	---

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

9/11
Revision Date: 05/28/2021
Print Date: 05/29/2021

regulations.

Contaminated packaging Triple rinse containers.
Puncture container to avoid re-use.
Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning.
If burned, stay out of smoke.
Follow advice on product label and/or leaflet.

SECTION 14: TRANSPORT INFORMATION

TDG

UN number	3265
Labels	8
Packaging group	III
Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON)

49CFR

UN number	3265
Class	8
Packaging group	III
Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON)

IMDG

UN number	3265
Class	8
Packaging group	III
Marine pollutant	NO
Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON SOLUTION)
Segregation group according to 5.4.1.5.11.1	IMDG SEGREGATION GROUP 1 - ACIDS

IATA

UN number	3265
Class	8
Packaging group	III
Environm. Hazardous Mark	NO
Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

Freight Classification: INHIBITORS, MODIFIERS OR REGULATORS, plant growth

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

10/11
Revision Date: 05/28/2021
Print Date: 05/29/2021

SECTION 15: REGULATORY INFORMATION

PCP Registration No. 11580

PMRA Information:

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product regulated by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:

Signal word: Danger!

Hazard statements: Corrosive - causes irreversible eye damage.
Harmful if swallowed or absorbed through skin.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
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 organisation

SAFETY DATA SHEET



ETHREL® LIQUID PLANT GROWTH REGULATOR

Version 3.0 / CDN
102000004255

11/11

Revision Date: 05/28/2021

Print Date: 05/29/2021

NFPA 704 (National Fire Protection Association):

Health - 3 Flammability - 1 Instability - 0 Others - none

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

Health - 3 Flammability - 0 Physical Hazard - 0 PPE -

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

Reason for Revision: The following sections have been revised: Section 2: Hazards Identification. Section 6. Accidental Release Measures. Section 7: Handling and Storage. Section 8: Exposure Controls / Personal Protection. Section 12. Ecological information. Reviewed and updated for general editorial purposes.

Revision Date: 05/28/2021

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.