



CERONE

Version 8 / IRL
10200001937

1/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

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

1.1 Product identifier

Trade name CERONE
UFI 3GS0-E0G5-X002-C64S
Product code (UVP) 05927242

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use Growth regulator

1.3 Details of the supplier of the safety data sheet

Supplier Bayer CropScience Ltd
Bayer Ltd
1st Floor, The Grange Offices
The Grange, Brewery Road
Stillorgan
A94 H2K7 Co. Dublin
Ireland

Telephone +353 1 216 3300

Responsible Department Email: gb-bcs-crop-regulatory-affairs@bayer.com

1.4 Emergency telephone no.

Emergency telephone no. 00800 1020 3333 (24 hr) (not available on non-contract mobile phones)

For Medical Professionals: You can also contact Dublin NPIS.

For Members of the Public: You can also contact 01 809 2166 (for Republic of Ireland).

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Corrosive to metals: Category 1
H290 May be corrosive to metals.

Serious eye damage: Category 1
H318 Causes serious eye damage.

Chronic aquatic toxicity: Category 2
H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements



CERONE

Version 8 / IRL
102000001937

2/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Ethephon



Signal word: Danger

Hazard statements

H290	May be corrosive to metals.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/ physician.
P501	Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site, except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

No additional hazards known beside those mentioned.

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).

Ecological information:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Soluble concentrate (SL)
Ethephon 480 g/l

**CERONE**Version 8 / IRL
102000001937

3/12

Revision Date: 10.02.2023
Print Date: 10.02.2023**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Ethephon	16672-87-0 240-718-3	Acute Tox. 4, H302 Acute Tox. 4, H332 Aquatic Chronic 2, H411 Acute Tox. 3, H311 Skin Corr. 1C, H314	40.00
2-Butoxyethanol	111-76-2 203-905-0 01-2119475108-36-XXXX	Acute Tox. 4, H332 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319	> 1.00 – < 25.00

Further information

2-Butoxyethanol	111-76-2	Oral: ATE = 1,200 mg/kg
-----------------	----------	-------------------------

Substances for which there are Community workplace exposure limits:

2-Butoxyethanol (111-76-2)

For the full text of the H-Statements mentioned in this Section, see Section 16.

Particle characteristics

This substance/ mixture does not contain nanoforms

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures**

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move to fresh air. Keep patient warm and at rest.
Skin contact	Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Ingestion	Do NOT induce vomiting. Keep at rest. Rinse mouth. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	Local:, Burns on skin and mucosal tissues Systemic:, Gastro-intestinal irritation, This product causes reversible cholinesterase inhibition without long term effects.
-----------------	---

4.3 Indication of any immediate medical attention and special treatment needed



CERONE

Version 8 / IRL
102000001937

4/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

Risks	Must NOT be confused with organophosphorus compounds!
Treatment	Treat symptomatically. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. There is no specific antidote. Contraindication: atropine.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable	Water spray, Foam, Carbon dioxide (CO ₂), Dry powder
Unsuitable	High volume water jet

5.2 Special hazards arising from the substance or mixture In the event of fire the following may be released:, Carbon monoxide (CO), Nitrogen oxides (NO_x), Oxides of phosphorus, Hydrogen chloride (HCl)

5.3 Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit.
Further information	Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 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.
--------------------	--

6.2 Environmental precautions Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 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.
Additional advice	Check also for any local site procedures.

6.4 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.

**CERONE**Version 8 / IRL
10200001937

5/12

Revision Date: 10.02.2023
Print Date: 10.02.2023**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling**

Advice on safe handling	No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.
Advice on protection against fire and explosion	Keep away from heat and sources of ignition.
Hygiene measures	Avoid contact with skin, eyes and clothing. Keep working clothes separately. Remove contaminated clothing immediately and dispose of safely. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Store in original container. Store in a place accessible by authorized persons only. Keep containers tightly closed in a cool, well-ventilated place. Protect from freezing. Keep away from direct sunlight.
Advice on common storage	Keep away from food, drink and animal feedingstuffs.
Suitable materials	HDPE (high density polyethylene)
7.3 Specific end use(s)	Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Ethephon	16672-87-0	1.4 mg/m ³ (TWA)		OES BCS*
2-Butoxyethanol	111-76-2	246 mg/m ³ /50 ppm (STEL)	12 2009	EU ELV
2-Butoxyethanol	111-76-2	246 mg/m ³ /50 ppm (STEL)	2018	ELV (IE)
2-Butoxyethanol	111-76-2	98 mg/m ³ /20 ppm (TWA)	12 2009	EU ELV
2-Butoxyethanol	111-76-2	98 mg/m ³ /20 ppm (TWA)	2007	ELV (IE)
2-Butoxyethanol	111-76-2	246 mg/m ³ /50 ppm (STEL)	2014	EU SCOELS
2-Butoxyethanol	111-76-2	98 mg/m ³ /20 ppm (TWA)	2014	EU SCOELS

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

8.2 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	Respiratory protection is not required under anticipated circumstances of exposure.
-------------------------------	---

**CERONE**Version 8 / IRL
10200001937

6/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Material	Nitrile rubber
Rate of permeability	> 480 min
Glove thickness	> 0.4 mm
Protective index	Class 6
Directive	Protective gloves complying with EN 374.

Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).

Skin and body protection

Wear standard coveralls and Category 3 Type 6 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Form	Liquid
Colour	colourless to brown
Odour	No data available
Odour Threshold	No data available
Melting point/range	No data available
Boiling point/boiling range	100 °C
Flammability	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Flash point	Not relevant; aqueous solution
Auto-ignition temperature	> 600 °C

**CERONE**Version 8 / IRL
10200001937

7/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

Thermal decomposition	250 - 400 °C The value mentioned relates to the active ingredient.
Self-accelarating decomposition temperature (SADT)	No data available
pH	<= 1.8 (1 %) (23 °C) (deionized water)
Viscosity, dynamic	No data available
Viscosity, kinematic	2.52 mm ² /s (40 °C)
Water solubility	miscible
Partition coefficient: n-octanol/water	Ethephon: log Pow: -1.89
Surface tension	37.9 mN/m (20 °C) Determined as a 1% solution in distilled water.
Vapour pressure	No data available
Density	ca. 1.20 g/cm ³ (20 °C)
Relative density	No data available
Relative vapour density	No data available
Assessment nano particles	This substance/ mixture does not contain nanoforms
Particle size	No data available
9.2 Other information	
Explosivity	No data available
Oxidizing properties	No data available
Evaporation rate	No data available
Other physico-chemical properties	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions. Corrodes metals in the presence of water or moisture. Risk of ethylene emission in case of increasing pH.



CERONE

Version 8 / IRL
102000001937

8/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

- 10.4 Conditions to avoid** Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials** Metals
- 10.6 Hazardous decomposition products** Gaseous hydrocarbons that may form explosive mixtures with air.
Hydrogen chloride formation.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in regulation (EC) No 1272/2008

- Acute oral toxicity** LD50 (Rat) > 2,000 mg/kg
- Acute inhalation toxicity** Not relevant
During intended and foreseen applications, no respirable aerosol is formed.
- Acute dermal toxicity** LD50 (Rat) > 2,000 mg/kg
ATE (Mix) (Rabbit) > 2,000 mg/kg
Calculation method
- Skin corrosion/irritation** No skin irritation (Rabbit)
- Serious eye damage/eye irritation** Risk of serious damage to eyes. (Rabbit)
- Respiratory or skin sensitisation** Skin: Non-sensitizing.

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.

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.

11.2 Information on other hazards

Endocrine disrupting properties

**CERONE**Version 8 / IRL
10200001937

9/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

Assessment The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) > 100 mg/l
Exposure time: 96 h

Toxicity to aquatic invertebrates (Daphnia magna (Water flea)) > 721 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient.

Toxicity to aquatic plants EC50 (Desmodesmus subspicatus (green algae)) 98 mg/l
Exposure time: 72 h
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.

12.2 Persistence and degradability

Biodegradability Ethephon:
Not rapidly biodegradable

Koc Ethephon: Koc: 2540

12.3 Bioaccumulative potential

Bioaccumulation Ethephon:
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Ethephon: Slightly mobile in soils

12.5 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).

12.6 Endocrine disrupting properties

Assessment The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Additional ecological information No other effects to be mentioned.

**CERONE**Version 8 / IRL
10200001937

10/12

Revision Date: 10.02.2023
Print Date: 10.02.2023**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

Product	It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.
Contaminated packaging	Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times. Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely. Follow advice on product label and/or leaflet.
Waste key for the unused product	02 01 08* agrochemical waste containing hazardous substances

SECTION 14: TRANSPORT INFORMATION**ADR/RID/ADN**

14.1 UN number	3265
14.2 Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON SOLUTION)
14.3 Transport hazard class(es)	8
14.4 Packaging Group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	80
Tunnel Code	E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG

14.1 UN number	3265
14.2 Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON SOLUTION)
14.3 Transport hazard class(es)	8
14.4 Packaging Group	III
14.5 Marine pollutant	YES
Segregation group according to 5.4.1.5.11.1	IMDG SEGREGATION GROUP 1 - ACIDS

IATA

14.1 UN number	3265
14.2 Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (ETHEPHON SOLUTION)
14.3 Transport hazard class(es)	8
14.4 Packaging Group	III
14.5 Environm. Hazardous Mark	YES



CERONE

Version 8 / IRL
10200001937

11/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Republic of Ireland Regulations

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Supply and Use

European Communities (Prohibition of Certain Active Substances in Plant Protection Products) Regulations 1981 (SI No 320/1981)
European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations 2003 (SI No 83/2003)
European Communities (Classification, Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations 2001 (SI No 624/2001)
2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (SI No 619/2001)

Waste Treatment

Landfill Directive
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)

Further information

WHO-classification: III (Slightly hazardous)

15.2 Chemical safety assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H411	Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by

**CERONE**Version 8 / IRL
10200001937

12/12

Revision Date: 10.02.2023
Print Date: 10.02.2023

	Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
ELV	Exposure Limit Value
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SI	Statutory Instrument
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2020/878 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

Reason for Revision: Safety Data Sheet according to Regulation (EU) No. 2020/878. Checked and revised for editorial purposes due to adjustments according to the current Annex II of the REACH regulation.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.