

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## HALCYON™ Herbicide

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	11/2/2022	800080004434	Date of first issue: 02.11.2022

Corteva Agriscience™ encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container. This Safety Data Sheet adheres to the standards and regulatory requirements of Ireland and may not meet the regulatory requirements in other countries.

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : HALCYON™ Herbicide

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

Use of the Sub-stance/Mixture : Plant Protection Product, Herbicide

#### 1.3 Details of the supplier of the safety data sheet

##### COMPANY IDENTIFICATION

##### Manufacturer/importer

Corteva Agriscience UK Limited  
CPC2 CAPITAL PARK  
FULBOURN CAMBRIDGE - England - CB21 5XE  
UNITED KINGDOM

**Customer Information** : +44 8006 89 8899

**Number**

**E-mail address** : SDS@corteva.com

#### 1.4 Emergency telephone

SGS +32 3 575 55 55 OR

+353 76 680 5288

National Poisons Information Centre: 01 809 2166

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Serious eye damage, Category 1

H318: Causes serious eye damage.

Specific target organ toxicity - single exposure, Category 3, Central nervous

H336: May cause drowsiness or dizziness.

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system  
Aspiration hazard, Category 1 H304: May be fatal if swallowed and enters airways.  
Short-term (acute) aquatic hazard, Category 1 H400: Very toxic to aquatic life.  
Long-term (chronic) aquatic hazard, Category 1 H410: Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H336 May cause drowsiness or dizziness.  
H304 May be fatal if swallowed and enters airways.  
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary Statements : **Prevention:**  
P261 Avoid breathing vapors.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**Storage:**  
P405 Store locked up.  
**Disposal:**  
P501 Dispose of contents/container to a licensed waste disposal contractor or collection site except for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.

#### Hazardous ingredients which must be listed on the label:

Hydrocarbons, C10, aromatics, <1% naphthalene

#### Additional Labeling

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

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The following percentage of the mixture consists of ingredient(s) with unknown acute inhalation toxicity: 4.128 %

### 2.3 Other hazards

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

#### Components

Chemical name	CAS-No. EC-No. Index-No. REACH Registration number	Classification	Concentration (% w/w)
fluroxypyr-meptyl (ISO)	81406-37-3 279-752-9 607-272-00-5	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	14.592
Aminopyralid Potassium	566191-87-5	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	3.685
Hydrocarbons, C10, aromatics, <1% naphthalene	1189173-42-9  01-2119463583-34-0008, 01-2119463583-34-0009, 01-2119463583-34-0010	STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 30 - < 40
Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, ammonium salt	32612-48-9	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 3 - < 10
2-methylpentane-2,4-diol	107-41-5 203-489-0 603-053-00-3 01-2119539582-35	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1 - < 3
Picloram	1918-02-1 217-636-1	Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic	>= 0.025 - < 0.1

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		aquatic toxicity): 10	
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 3; H412 <hr/> M-Factor (Acute aquatic toxicity): 1 <hr/> specific concentration limit Skin Sens. 1; H317 >= 0.05 %	>= 0.025 - < 0.05
Substances with a workplace exposure limit :			
Dipropylene glycol monomethyl ether	34590-94-8 252-104-2		>= 20 - < 25

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first-aid measures

- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection).  
If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- If inhaled : Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.
- In case of skin contact : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.  
Suitable emergency safety shower facility should be available in work area.
- In case of eye contact : Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.  
Suitable emergency eye wash facility should be immediately available.

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If swallowed : Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

### 4.2 Most important symptoms and effects, both acute and delayed

None known.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. The decision of whether to induce vomiting or not should be made by a physician. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Excessive exposure may aggravate preexisting liver and kidney disease.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray  
Alcohol-resistant foam

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Nitrogen oxides (NOx)  
Carbon oxides

### 5.3 Advice for firefighters

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Specific extinguishing methods : Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must

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Further information : be disposed of in accordance with local regulations.  
: Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Ensure adequate ventilation.  
Use personal protective equipment.  
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

#### 6.2 Environmental precautions

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.  
Discharge into the environment must be avoided.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g., by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.  
Prevent from entering into soil, ditches, sewers, underwater.  
See Section 12, Ecological Information.

#### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped,  
Recovered material should be stored in a vented container.  
The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to over-pressurization of the container.  
Keep in suitable, closed containers for disposal.  
Wipe up with absorbent material (e.g. cloth, fleece).  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
See Section 13, Disposal Considerations, for additional information.

#### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : To avoid spills during handling keep bottle on a metal tray.  
Avoid formation of aerosol.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Do not breathe vapors/dust.  
Do not smoke.  
Handle in accordance with good industrial hygiene and safety practice.  
Avoid exposure - obtain special instructions before use.  
Smoking, eating and drinking should be prohibited in the application area.  
Do not breathe vapors or spray mist.  
Do not swallow.  
Do not get in eyes.  
Avoid contact with skin and eyes.  
Avoid prolonged or repeated contact with skin.  
Keep container tightly closed.  
Take care to prevent spills, waste and minimize release to the environment.  
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

#### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labeled containers. Store in accordance with the particular national regulations.

Advice on common storage : Strong oxidizing agents

Packaging material : Unsuitable material: None known.

#### 7.3 Specific end use(s)

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Dipropylene glycol monomethyl ether	34590-94-8	Limit Value - eight hours	50 ppm 308 mg/m <sup>3</sup>	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		Occupational exposure limit value (8-hour reference period)	50 ppm 308 mg/m <sup>3</sup>	IE OEL

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		Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body		
		Time weighted average	10 ppm	Dow IHG
		Short term exposure limit	30 ppm	Dow IHG
2-methylpentane-2,4-diol	107-41-5	Occupational exposure limit value (15-minute reference period)	25 ppm 125 mg/m <sup>3</sup>	IE OEL
		Short term exposure limit (Aerosol)	10 mg/m <sup>3</sup>	Dow IHG
		Ceiling Limit Value (Vapor)	25 ppm	Dow IHG
Picloram	1918-02-1	Occupational exposure limit value (8-hour reference period)	10 mg/m <sup>3</sup>	IE OEL
		Occupational exposure limit value (15-minute reference period)	20 mg/m <sup>3</sup>	IE OEL

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
Dipropylene glycol monomethyl ether	Workers	Inhalation	Long-term systemic effects	310 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	65 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	37.2 mg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	15 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	1.67 mg/kg bw/day
	2-methylpentane-2,4-diol	Workers	Inhalation	Long-term systemic effects
Workers		Inhalation	Long-term local effects	49 mg/m <sup>3</sup>
Workers		Inhalation	Acute local effects	98 mg/m <sup>3</sup>
Workers		Skin contact	Long-term systemic effects	2 mg/kg bw/day
Consumers		Inhalation	Long-term systemic effects	3.5 mg/m <sup>3</sup>
Consumers		Inhalation	Long-term local effects	25 mg/m <sup>3</sup>
Consumers		Inhalation	Acute local effects	49 mg/m <sup>3</sup>
Consumers		Skin contact	Long-term systemic effects	1 mg/kg bw/day
Consumers		Ingestion	Long-term systemic effects	1 mg/kg bw/day



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### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Dipropylene glycol monomethyl ether	Fresh water	19 mg/l
	Sea sediment	1.9 mg/l
	Intermittent use/release	190 mg/l
	Sewage treatment plant	4168 mg/l
	Fresh water sediment	70.2 mg/kg
2-methylpentane-2,4-diol	Sea sediment	7.02 mg/kg
	Soil	2.74 mg/kg
	Fresh water	0.429 mg/l
	Sea water	0.0429 mg/l
	Intermittent use/release	4.29 mg/l
	Sewage treatment plant	20 mg/l
	Fresh water sediment	1.79 mg/kg
	Sea sediment	0.179 mg/kg
	Soil	0.11 mg/kg
	Oral (Secondary Poisoning)	100 mg/kg food

## 8.2 Exposure controls

### Engineering measures

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Personal protective equipment

Eye protection : Use chemical goggles.  
Chemical goggles should be consistent with EN 166 or equivalent.

Hand protection

Remarks : Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and

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frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Skin and body protection : Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Physical state	: Liquid.
Color	: Brown
Odor	: Mild
Odor Threshold	: No test data available
Melting point/range	: Not applicable
Freezing point	: No data available
Boiling point/boiling range	: No data available
Flammability	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Flash point	: > 100 °C Method: CIPAC MT 12.3, closed cup
Autoignition temperature	: > 400 °C Method: EC Method A15

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pH	:	5.8 (19 °C) Concentration: 1 % Method: pH Electrode (1% aqueous suspension)
Viscosity Viscosity, kinematic	:	13.1 mm <sup>2</sup> /s
Solubility(ies) Water solubility	:	emulsifiable
Vapor pressure	:	No data available
Density	:	1.012 g/cm <sup>3</sup> (20 °C) Method: Digital density meter
Relative vapor density	:	No data available

### 9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	No
Evaporation rate	:	No data available
Surface tension	:	31.6 mN/m, 25 °C, EC Method A5

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.  
Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions	:	Stable under recommended storage conditions. No hazards to be specially mentioned. None known.
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### 10.4 Conditions to avoid

Conditions to avoid	:	None known.
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### 10.5 Incompatible materials

Materials to avoid	:	Strong acids Strong bases
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### 10.6 Hazardous decomposition products

Carbon oxides

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## SECTION 11: Toxicological information

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

#### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg  
Method: OECD Test Guideline 402

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Method: OECD Test Guideline 402

##### Components:

##### **fluroxypyr-meptyl (ISO):**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Symptoms: No deaths occurred at this concentration.  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 1.16 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Symptoms: No deaths occurred at this concentration.  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Maximum attainable concentration.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Symptoms: No deaths occurred at this concentration.  
Assessment: The substance or mixture has no acute dermal toxicity

##### **Aminopyralid Potassium:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : Remarks: No adverse effects are anticipated from single exposure to dust.  
Based on the available data, respiratory irritation was not observed.

LC50 (Rat): > 5.10 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Symptoms: No deaths occurred at this concentration.  
Assessment: The substance or mixture has no acute inhalation toxicity

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Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

### Hydrocarbons, C10, aromatics, <1% naphthalene:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Remarks: For similar material(s):

Acute inhalation toxicity : LC50 (Rat): > 4.688 mg/l  
Exposure time: 4 h  
Test atmosphere: vapor  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: For similar material(s):  
Maximum attainable concentration.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: For similar material(s):

### Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, ammonium salt:

Acute oral toxicity : Remarks: Low toxicity if swallowed.  
Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.  
May cause nausea and vomiting.

LD50 (Rat): > 2,000 mg/kg

Acute dermal toxicity : Remarks: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50 (Rat): > 2,000 mg/kg

### 2-methylpentane-2,4-diol:

Acute oral toxicity : LD50 (Rat): 3,600 - 4,700 mg/kg

Acute inhalation toxicity : Remarks: Vapor from heated material may cause respiratory irritation.  
No deaths occurred following exposure to a saturated atmosphere.

Acute dermal toxicity : LD50 (Rabbit): 13,200 mg/kg

### Picloram:

Acute oral toxicity : LD50 (Rat, male): > 5,000 mg/kg  
Remarks: Signs and symptoms of excessive exposure may include:  
Convulsions.

LD50 (Rat, female): 4,012 mg/kg

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Acute inhalation toxicity : LC50 (Rat, male and female): > 0.035 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

Symptoms: No deaths occurred at this concentration.  
Remarks: Maximum attainable concentration.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

### **1,2-benzisothiazol-3(2H)-one:**

Acute oral toxicity : LD50 (Rat): 675.3 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.25 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

### **Dipropylene glycol monomethyl ether:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 3.35 mg/l  
Exposure time: 7 h  
Test atmosphere: vapor  
Symptoms: No deaths occurred at this concentration.  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): 9,510 mg/kg

### **Skin corrosion/irritation**

#### **Product:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### **Components:**

##### **fluroxypyr-meptyl (ISO):**

Species : Rabbit  
Result : No skin irritation

##### **Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, ammonium salt:**

Result : Skin irritation

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### 2-methylpentane-2,4-diol:

Result : Skin irritation

### 1,2-benzisothiazol-3(2H)-one:

Species : Rabbit  
Result : Skin irritation

### Dipropylene glycol monomethyl ether:

Species : Rabbit  
Result : No skin irritation

### Serious eye damage/eye irritation

#### Product:

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : Corrosive

#### Components:

### Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, ammonium salt:

Result : Eye irritation

### 2-methylpentane-2,4-diol:

Result : Eye irritation

### 1,2-benzisothiazol-3(2H)-one:

Species : Rabbit  
Result : Corrosive

### Dipropylene glycol monomethyl ether:

Species : Rabbit  
Result : No eye irritation

### Respiratory or skin sensitization

#### Product:

Test Type : Maximization Test  
Species : Guinea pig  
Assessment : Does not cause skin sensitization.  
Method : OECD Test Guideline 406

#### Components:

### fluroxypyr-meptyl (ISO):

Species : Guinea pig

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Assessment : Does not cause skin sensitization.

### **Aminopyralid Potassium:**

Remarks : Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:  
No relevant data found.

### **Hydrocarbons, C10, aromatics, <1% naphthalene:**

Remarks : For similar material(s):  
Did not cause allergic skin reactions when tested in guinea pigs.

Remarks : For respiratory sensitization:  
No relevant data found.

### **2-methylpentane-2,4-diol:**

Remarks : Did not cause allergic skin reactions when tested in guinea pigs.  
Skin contact may cause an allergic skin reaction in a small proportion of individuals.

Remarks : For respiratory sensitization:  
No relevant data found.

### **Picloram:**

Species : Guinea pig  
Assessment : Does not cause skin sensitization.

### **1,2-benzisothiazol-3(2H)-one:**

Species : Mouse  
Assessment : The product is a skin sensitizer, sub-category 1B.

### **Dipropylene glycol monomethyl ether:**

Species : human  
Result : Does not cause skin sensitization.

### **Germ cell mutagenicity**

#### **Components:**

#### **fluroxypyr-meptyl (ISO):**

Germ cell mutagenicity- Assessment : In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

#### **Aminopyralid Potassium:**

Germ cell mutagenicity- Assessment : For similar active ingredient(s)., Aminopyralid., In vitro genetic



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essment toxicity studies were predominantly negative., Animal genetic toxicity studies were negative.

### Hydrocarbons, C10, aromatics, <1% naphthalene:

Germ cell mutagenicity- Assessment : For similar material(s);, In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.

### 2-methylpentane-2,4-diol:

Germ cell mutagenicity- Assessment : In vitro genetic toxicity studies were negative.

### Picloram:

Germ cell mutagenicity- Assessment : In vitro tests did not show mutagenic effects

### 1,2-benzisothiazol-3(2H)-one:

Germ cell mutagenicity- Assessment : Not mutagenic when tested in bacterial or mammalian systems.

### Dipropylene glycol monomethyl ether:

Germ cell mutagenicity- Assessment : In vitro genetic toxicity studies were negative.

## Carcinogenicity

### Components:

#### fluroxypyr-meptyl (ISO):

Carcinogenicity - Assessment : For similar active ingredient(s);, Fluroxypyr.;, Did not cause cancer in laboratory animals.

#### Aminopyralid Potassium:

Carcinogenicity - Assessment : For similar active ingredient(s);, Aminopyralid.;, Did not cause cancer in laboratory animals.

#### Picloram:

Carcinogenicity - Assessment : Did not cause cancer in laboratory animals.

#### Dipropylene glycol monomethyl ether:

Carcinogenicity - Assessment : For similar material(s);, Did not cause cancer in laboratory animals.

## Reproductive toxicity

### Components:

#### fluroxypyr-meptyl (ISO):

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.;, Did not cause birth defects in laboratory

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animals.

### **Aminopyralid Potassium:**

Reproductive toxicity - Assessment : For similar active ingredient(s), Aminopyralid., In animal studies, did not interfere with reproduction.  
For similar active ingredient(s), Aminopyralid., Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

### **Hydrocarbons, C10, aromatics, <1% naphthalene:**

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.  
For similar material(s);, Did not cause birth defects or any other fetal effects in laboratory animals.

### **2-methylpentane-2,4-diol:**

Reproductive toxicity - Assessment : In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals., In animal studies, did not interfere with fertility.  
Did not cause birth defects in laboratory animals.

### **Picloram:**

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction.  
Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

### **1,2-benzisothiazol-3(2H)-one:**

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In animal studies, did not interfere with fertility.  
Did not cause birth defects in laboratory animals.

### **Dipropylene glycol monomethyl ether:**

Reproductive toxicity - Assessment : For similar material(s);, In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.  
Did not cause birth defects or any other fetal effects in laboratory animals.

### **STOT-single exposure**

#### **Product:**

Assessment : May cause drowsiness or dizziness.

#### **Components:**

#### **Aminopyralid Potassium:**

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

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### Hydrocarbons, C10, aromatics, <1% naphthalene:

Routes of exposure : Inhalation  
Assessment : May cause drowsiness or dizziness.

### 2-methylpentane-2,4-diol:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

### 1,2-benzisothiazol-3(2H)-one:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

### Dipropylene glycol monomethyl ether:

Assessment : Evaluation of available data suggests that this material is not an STOT-SE toxicant.

### Repeated dose toxicity

#### Components:

#### fluroxypyr-meptyl (ISO):

Remarks : Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

#### Aminopyralid Potassium:

Remarks : For similar active ingredient(s).  
Aminopyralid.  
In animals, effects have been reported on the following organs:  
Gastrointestinal tract.

### Hydrocarbons, C10, aromatics, <1% naphthalene:

Remarks : Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

### 2-methylpentane-2,4-diol:

Remarks : In animals, effects have been reported on the following organs:  
Kidney.

### Picloram:

Remarks : In animals, effects have been reported on the following organs:  
Liver.  
Gastrointestinal tract.

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### **1,2-benzisothiazol-3(2H)-one:**

Remarks : Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

### **Dipropylene glycol monomethyl ether:**

Remarks : Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

### **Aspiration toxicity**

#### **Product:**

May be fatal if swallowed and enters airways.

#### **Components:**

##### **fluroxypyr-meptyl (ISO):**

Based on physical properties, not likely to be an aspiration hazard.

##### **Aminopyralid Potassium:**

Based on available information, aspiration hazard could not be determined.

##### **Hydrocarbons, C10, aromatics, <1% naphthalene:**

May be fatal if swallowed and enters airways.

##### **2-methylpentane-2,4-diol:**

Based on available information, aspiration hazard could not be determined.

##### **Picloram:**

Based on physical properties, not likely to be an aspiration hazard.

##### **Dipropylene glycol monomethyl ether:**

Based on physical properties, not likely to be an aspiration hazard.

## **11.2 Information on other hazards**

### **Endocrine disrupting properties**

#### **Product:**

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.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

**Product:**

Toxicity to fish : Remarks: Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): 6.42 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 28.7 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : ErC50 (diatom Navicula sp.): 7.7 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition  
Method: OECD Test Guideline 201 or Equivalent

ErC50 (Myriophyllum spicatum): 0.506 mg/l  
Exposure time: 14 d

NOEC (Myriophyllum spicatum): 0.0977 mg/l  
Exposure time: 14 d

Toxicity to soil dwelling organisms : LC50: 710 mg/kg  
Exposure time: 14 d  
Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

oral LD50: > 2,250 mg/kg  
Species: Colinus virginianus (Bobwhite quail)

oral LD50: > 100 micrograms/bee  
Species: Apis mellifera (bees)

contact LD50: > 200 micrograms/bee  
Species: Apis mellifera (bees)

#### **Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

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Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

### Components:

#### **fluroxypyr-meptyl (ISO):**

Toxicity to fish : Remarks: Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.225 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.183 mg/l  
Exposure time: 48 h  
Test Type: semi-static test  
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : ErC50 (diatom Navicula sp.): 0.24 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201 or Equivalent

EbC50 (alga Scenedesmus sp.): > 0.47 mg/l  
Exposure time: 72 h

ErC50 (Selenastrum capricornutum (green algae)): > 1.410 mg/l  
Exposure time: 96 h

ErC50 (Myriophyllum spicatum): 0.075 mg/l  
Exposure time: 14 d

NOEC (Myriophyllum spicatum): 0.031 mg/l  
Exposure time: 14 d

Toxicity to fish (Chronic toxicity) : NOEC: 0.32 mg/l  
Species: Rainbow trout (Oncorhynchus mykiss)

Toxicity to soil dwelling organisms : LC50: > 1,000 mg/kg  
Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).  
Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

oral LD50: > 2000 mg/kg bodyweight.  
Exposure time: 5 d  
Species: Colinus virginianus (Bobwhite quail)

dietary LC50: > 5000 mg/kg diet.

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Species: *Colinus virginianus* (Bobwhite quail)

oral LD50: > 100 micrograms/bee  
Exposure time: 48 h  
Species: *Apis mellifera* (bees)

contact LD50: > 100 micrograms/bee  
Exposure time: 48 h  
Species: *Apis mellifera* (bees)

### Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

### Aminopyralid Potassium:

Toxicity to fish : Remarks: For similar active ingredient(s).  
Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 100 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Algae): 100 mg/l  
Exposure time: 72 h

ErC50 (*Myriophyllum spicatum*): 0.363 mg/l  
Exposure time: 14 d  
Remarks: For similar material(s):

NOEC (*Myriophyllum spicatum*): 0.0639 mg/l  
Exposure time: 14 d  
Remarks: For similar material(s):

Toxicity to terrestrial organisms : Remarks: Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).  
Material is slightly toxic to birds on a dietary basis (LC50 between 1001 and 5000 ppm).

### Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

### Hydrocarbons, C10, aromatics, <1% naphthalene:

Toxicity to fish : Remarks: For similar material(s):

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Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Remarks: For similar material(s):  
Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l  
Exposure time: 96 h  
Remarks: For similar material(s):

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 3 - 10 mg/l  
Exposure time: 48 h  
Remarks: For similar material(s):

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 11 mg/l  
Exposure time: 72 h  
Remarks: For similar material(s):

### Ecotoxicology Assessment

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

### 2-methylpentane-2,4-diol:

Toxicity to fish : Remarks: Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LC50 (Oncorhynchus mykiss (rainbow trout)): 9,450 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 3,200 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): > 429 mg/l  
End point: Growth rate inhibition  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Bacteria): > 5,000 mg/l  
Exposure time: 16 h  
Method: hUCC

### Picloram:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 8.8 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 44.2 mg/l



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aquatic invertebrates	Exposure time: 48 h
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 78.7 mg/l End point: Growth rate inhibition Exposure time: 72 h  EC50 (Lemna gibba): 102 mg/l Exposure time: 14 d Test Type: Growth inhibition  ErC50 (Myriophyllum spicatum): 0.558 mg/l Exposure time: 14 d  NOEC (Myriophyllum spicatum): 0.0095 mg/l Exposure time: 14 d
M-Factor (Acute aquatic toxicity)	: 1
Toxicity to microorganisms	: EC50 (activated sludge): > 100 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	: 0.55 mg/l Exposure time: 70 d Species: Rainbow trout (Oncorhynchus mykiss) Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 6.79 mg/l End point: number of offspring Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: static test  LOEC: 13.5 mg/l End point: number of offspring Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: static test  MATC (Maximum Acceptable Toxicant Level): 9.57 mg/l End point: number of offspring Exposure time: 21 d Species: Daphnia magna (Water flea) Test Type: static test
M-Factor (Chronic aquatic toxicity)	: 10
Toxicity to soil dwelling organisms	: LC50: > 5,000 mg/kg Exposure time: 14 d End point: survival Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organ-	: contact LD50: > 100 micrograms/bee

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Exposure time: 48 h  
Species: Apis mellifera (bees)

oral LD50: > 74 micrograms/bee  
Exposure time: 48 d  
Species: Apis mellifera (bees)

### Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

### 1,2-benzisothiazol-3(2H)-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.9 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.7 mg/l  
Exposure time: 48 h  
Test Type: flow-through test  
Method: OECD Test Guideline 202 or Equivalent

LC50 (Mysid shrimp (Mysidopsis bahia)): 1.9 mg/l  
Exposure time: 96 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.8 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201 or Equivalent

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.21 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201 or Equivalent

ErC50 (diatom Skeletonema costatum): 0.36 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201 or Equivalent

NOEC (diatom Skeletonema costatum): 0.15 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201 or Equivalent

M-Factor (Acute aquatic toxicity) : 1

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Toxicity to microorganisms : EC50 (Bacteria (active sludge)): 28.52 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition of activated sludge

### Dipropylene glycol monomethyl ether:

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 1,000 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 1,919 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202 or Equivalent

LC50 (Crangon crangon (shrimp)): > 1,000 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 202 or Equivalent

LC50 (copepod Acartia tonsa): 2,070 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: ISO TC147/SC5/WG2

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 969 mg/l  
End point: Biomass  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 201 or Equivalent

Toxicity to microorganisms : EC10 (Pseudomonas putida): 4,168 mg/l  
Exposure time: 18 h

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.5 mg/l  
Exposure time: 22 d  
Species: Daphnia magna (Water flea)  
Test Type: flow-through test  
Method: OECD Test Guideline 211 or Equivalent

LOEC: > 0.5 mg/l  
Exposure time: 22 d  
Species: Daphnia magna (Water flea)  
Test Type: flow-through test  
Method: OECD Test Guideline 211 or Equivalent

MATC (Maximum Acceptable Toxicant Level): > 0.5 mg/l  
Exposure time: 22 d  
Species: Daphnia magna (Water flea)  
Test Type: flow-through test  
Method: OECD Test Guideline 211 or Equivalent

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### Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

### 12.2 Persistence and degradability

#### Components:

##### **fluroxypyr-meptyl (ISO):**

Biodegradability : Result: Not biodegradable  
Remarks: Material is not readily biodegradable according to OECD/EEC guidelines.

Biodegradation: 32 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D or Equivalent  
Remarks: 10-day Window: Fail

ThOD : 2.2 kg/kg

Stability in water : Test Type: Hydrolysis  
Degradation half life (half-life): 454 d

##### **Aminopyralid Potassium:**

Biodegradability : Remarks: For similar active ingredient(s).  
Aminopyralid.  
Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F or Equivalent  
Remarks: 10-day Window: Fail

##### **Hydrocarbons, C10, aromatics, <1% naphthalene:**

Biodegradability : Remarks: Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).

##### **2-methylpentane-2,4-diol:**

Biodegradability : Result: Readily biodegradable.  
Remarks: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Biodegradation: 81 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F or Equivalent  
Remarks: 10-day Window: Pass

##### **Picloram:**

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Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 1.95 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301  
Remarks: 10-day Window: Fail

Stability in water : Test Type: Hydrolysis  
Degradation half life (half-life): > 1.8 yr (45 °C)  
pH: 5 - 9  
Method: Measured

Photodegradation : Test Type: Half-life (direct photolysis)  
  
Test Type: Half-life (indirect photolysis)  
Sensitizer: OH radicals  
Concentration: 1,500,000 1/cm<sup>3</sup>  
Rate constant: 8.5E-13 cm<sup>3</sup>/s

### 1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 24 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B or Equivalent  
Remarks: Abiotic degradation: The material is rapidly degradable by abiotic means.

### Dipropylene glycol monomethyl ether:

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 75 %  
Exposure time: 28 d  
Remarks: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.  
Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).  
  
Test Type: aerobic  
Method: OECD Test Guideline 301F or Equivalent  
Remarks: 10-day Window: Pass

## 12.3 Bioaccumulative potential

### Components:

#### fluroxypyr-meptyl (ISO):

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)  
Bioconcentration factor (BCF): 26  
Method: Measured

Partition coefficient: n-octanol/water :  
  
log Pow: 5.04  
Method: Measured

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Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

### Aminopyralid Potassium:

Partition coefficient: n-octanol/water : Remarks: For similar active ingredient(s).  
Aminopyralid.  
Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

### Hydrocarbons, C10, aromatics, <1% naphthalene:

Partition coefficient: n-octanol/water : Remarks: No data available for this product.  
For similar material(s):  
Bioconcentration potential is high (BCF > 3000 or Log Pow between 5 and 7).

### Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, ammonium salt:

Partition coefficient: n-octanol/water : Remarks: No relevant data found.

### 2-methylpentane-2,4-diol:

Bioaccumulation : Bioconcentration factor (BCF): 3  
Method: Calculated.

Partition coefficient: n-octanol/water : log Pow: 0.58  
Method: Estimated.  
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

### Picloram:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 0.54

Partition coefficient: n-octanol/water : log Pow: -1.92  
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

### 1,2-benzisothiazol-3(2H)-one:

Bioaccumulation : Species: Fish  
Bioconcentration factor (BCF): 3.2  
Method: Calculated.

Partition coefficient: n-octanol/water : log Pow: 1.19  
Method: OECD Test Guideline 117 or Equivalent  
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

### Dipropylene glycol monomethyl ether:

Partition coefficient: n-octanol/water : log Pow: 1.01  
Method: Measured  
Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

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### 12.4 Mobility in soil

#### Components:

##### **fluroxypyr-meptyl (ISO):**

Distribution among environmental compartments : Koc: 6200 - 43000  
Remarks: Expected to be relatively immobile in soil (Koc > 5000).

##### **Aminopyralid Potassium:**

Distribution among environmental compartments : Remarks: For similar active ingredient(s).  
Aminopyralid.  
Potential for mobility in soil is very high (Koc between 0 and 50).

##### **Hydrocarbons, C10, aromatics, <1% naphthalene:**

Distribution among environmental compartments : Remarks: No relevant data found.

##### **Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, ammonium salt:**

Distribution among environmental compartments : Remarks: No relevant data found.

##### **2-methylpentane-2,4-diol:**

Distribution among environmental compartments : Koc: 1  
Method: Estimated.  
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

##### **Picloram:**

Distribution among environmental compartments : Koc: 35  
Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

##### **Stability in soil**

: Test Type: aerobic degradation  
Dissipation time: 167 - 513 h  
Method: Measured  
Test Type: anaerobic degradation  
Dissipation time: > 300 h  
Method: Measured

##### **1,2-benzisothiazol-3(2H)-one:**

Distribution among environmental compartments : Koc: 104  
Method: Estimated.  
Remarks: Potential for mobility in soil is high (Koc between 50 and 150).  
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

##### **Dipropylene glycol monomethyl ether:**

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Distribution among environmental compartments : Koc: 0.28  
Method: Estimated.  
Remarks: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.  
Potential for mobility in soil is very high (Koc between 0 and 50).

### 12.5 Results of PBT and vPvB assessment

#### Components:

##### **fluroxypyr-meptyl (ISO):**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

##### **Aminopyralid Potassium:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

##### **Hydrocarbons, C10, aromatics, <1% naphthalene:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

##### **Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, ammonium salt:**

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

##### **2-methylpentane-2,4-diol:**

Assessment : This substance is not considered to be very persistent and very bioaccumulating (vPvB).

##### **Picloram:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

##### **1,2-benzisothiazol-3(2H)-one:**

Assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

##### **Dipropylene glycol monomethyl ether:**

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).



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### 12.6 Endocrine disrupting properties

**Product:**

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

**Components:**

**fluroxypyr-meptyl (ISO):**

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Aminopyralid Potassium:**

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Hydrocarbons, C10, aromatics, <1% naphthalene:**

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, ammonium salt:**

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**2-methylpentane-2,4-diol:**

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Picloram:**

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**1,2-benzisothiazol-3(2H)-one:**

Ozone-Depletion Potential : Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Dipropylene glycol monomethyl ether:**

Ozone-Depletion Potential : Regulation: (Update: 11/22/2010 KS 11/25/2010 LMK)  
Remarks: This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Product : If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

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### SECTION 14: Transport information

#### 14.1 UN number or ID number

ADR : UN 3082  
RID : UN 3082  
IMDG : UN 3082  
IATA : UN 3082

#### 14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Aromatic hydrocarbon)  
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Aromatic hydrocarbon)  
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Aromatic hydrocarbon)  
IATA : Environmentally hazardous substance, liquid, n.o.s.  
(Aromatic hydrocarbon)

#### 14.3 Transport hazard class(es)

ADR : 9  
RID : 9  
IMDG : 9  
IATA : 9

#### 14.4 Packing group

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### ADR

Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9  
Tunnel restriction code : (-)

### RID

Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9

### IMDG

Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Remarks : Stowage category A

### IATA (Cargo)

Packing instruction (cargo aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

### IATA (Passenger)

Packing instruction (passenger aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

## 14.5 Environmental hazards

### ADR

Environmentally hazardous : yes

### RID

Environmentally hazardous : yes

### IMDG

Marine pollutant : yes

## 14.6 Special precautions for user

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA Special provision A197, and ADR/RID special provision 375.

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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### SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59) : Not applicable  
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable  
Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : naphthalene  
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable  
REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. E1 ENVIRONMENTAL HAZARDS

#### 15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications..

The mixture is evaluated within the frame of the provisions of Regulation (EC) No. 1107/2009. Refer to the label for exposure assessment information.

### SECTION 16: Other information

#### Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

#### Full text of H-Statements

H302 : Harmful if swallowed.  
H304 : May be fatal if swallowed and enters airways.  
H315 : Causes skin irritation.  
H317 : May cause an allergic skin reaction.  
H318 : Causes serious eye damage.  
H319 : Causes serious eye irritation.  
H336 : May cause drowsiness or dizziness.  
H400 : Very toxic to aquatic life.  
H410 : Very toxic to aquatic life with long lasting effects.  
H411 : Toxic to aquatic life with long lasting effects.  
H412 : Harmful to aquatic life with long lasting effects.

#### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Aquatic Acute : Short-term (acute) aquatic hazard  
Aquatic Chronic : Long-term (chronic) aquatic hazard  
Asp. Tox. : Aspiration hazard

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Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitization
STOT SE	: Specific target organ toxicity - single exposure
2000/39/EC	: Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
Dow IHG	: Dow Industrial Hygiene Guideline
IE OEL	: Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
2000/39/EC / TWA	: Limit Value - eight hours
Dow IHG / STEL	: Short term exposure limit
Dow IHG / TLV-C	: Ceiling Limit Value
Dow IHG / TWA	: Time weighted average
IE OEL / OELV - 8 hrs (TWA)	: Occupational exposure limit value (8-hour reference period)
IE OEL / OELV - 15 min (STEL)	: Occupational exposure limit value (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

**Classification of the mixture:**

**Classification procedure:**

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Eye Dam. 1	H318	Based on product data or assessment
STOT SE 3	H336	Based on product data or assessment
Asp. Tox. 1	H304	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

Product code: GF-839

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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