

# SAFETY DATA SHEET

according to the Hazardous Products Regulations



## LONTREL™ 360 HERBICIDE

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	02/07/2025	800080003176	Date of first issue: 02/07/2025

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 Canada and may not meet the regulatory requirements in other countries.

### SECTION 1. IDENTIFICATION

Product name : LONTREL™ 360 HERBICIDE  
Other means of identification : No data available

#### Manufacturer or supplier's details

##### COMPANY IDENTIFICATION

Manufacturer/importer : CORTEVA AGRISCIENCE CANADA COMPANY  
SUITE 240, 115 QUARRY PARK RD. SE  
CALGARY AB, T2C 5G9  
CANADA

Customer Information : 800-667-3852  
Number  
E-mail address : solutions@corteva.com

Emergency telephone : Corteva Canada Solutions: 1-800-667-3852  
number

#### Recommended use of the chemical and restrictions on use

Recommended use : End use herbicide product

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with the Hazardous Products Regulations

Flammable liquids : Category 3

#### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.

Precautionary statements : **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

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P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

### Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Clopyralid monoethanolamine salt	Clopyralid monoethanolamine salt	57754-85-5	40.89
propan-2-ol	propan-2-ol	67-63-0	$\geq 3 - < 7$ *
Alkylphenol alkoxylate	Alkylphenol alkoxylate	69029-39-6	$\geq 0.5 - < 1.5$ *
Balance	Balance	Not Assigned	$> 50$

\* Actual concentration or concentration range is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

- 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.  
If breathing is difficult, oxygen should be administered by qualified personnel.
- 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 : Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.  
Suitable emergency eye wash facility should be available in work area.
- If swallowed : No emergency medical treatment necessary.
- Most important symptoms and effects, both acute and delayed : None known.
- 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.
- Notes to physician : Maintain adequate ventilation and oxygenation of the patient.  
May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help.

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Hemodialysis may be of benefit if substantial amounts have been ingested and the patient is showing signs of intoxication. Consider hemodialysis for patients with persistent hypotension or coma unresponsive to standard therapy (isopropanol levels >400 - 500 mg/dl). (Goldfrank, Toxicological Emergencies 7th ed., 2002; King, JAMA, 1970, 211:1855).  
No specific antidote.  
Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.  
Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.  
Repeated excessive exposure may aggravate preexisting lung disease.

### SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : Do not use direct water stream.  
High volume water jet
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.  
Vapours may form explosive mixtures with air.  
Do not allow run-off from fire fighting to enter drains or water courses.  
Flash back possible over considerable distance.
- Hazardous combustion products : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.  
Combustion products may include and are not limited to:  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen chloride gas  
Carbon oxides
- 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.
- Further information : Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.  
Do not use a solid water stream as it may scatter and spread fire.  
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.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

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Use personal protective equipment.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  
Remove all sources of ignition.  
Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
- 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.
- Methods and materials for containment and 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.  
Wipe up with absorbent material (e.g. cloth, fleece).  
Non-sparking tools should be used.  
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
See Section 13, Disposal Considerations, for additional information.

### SECTION 7. HANDLING AND STORAGE

- Local/Total ventilation : Use with local exhaust ventilation.  
Use only in an area equipped with explosion proof exhaust ventilation.
- Advice on safe handling : Avoid formation of aerosol.  
Non-sparking tools should be used.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Open drum carefully as content may be under pressure.  
Do not breathe vapours/dust.  
Do not smoke.  
Handle in accordance with good industrial hygiene and safety practice.

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Conditions for safe storage	:	Smoking, eating and drinking should be prohibited in the application area. Keep container tightly closed. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. 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.
		Store in a closed container. No smoking. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Keep tightly closed.
Materials to avoid	:	Store in accordance with the particular national regulations. Strong oxidizing agents Organic peroxides Flammable solids Pyrophoric liquids Self-heating substances and mixtures Substances and mixtures, which in contact with water, emit flammable gases Explosives Gases
Packaging material	:	Unsuitable material: None known.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
propan-2-ol	67-63-0	STEL	400 ppm 984 mg/m <sup>3</sup>	CA AB OEL
		TWA	200 ppm 492 mg/m <sup>3</sup>	CA AB OEL
		TWA	200 ppm	CA BC OEL
		STEL	400 ppm	CA BC OEL
		TWAEV	200 ppm	CA QC OEL
		STEV	400 ppm	CA QC OEL
		TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

**Engineering measures** : Use engineering controls to maintain airborne level below exposure limit requirements or guidelines.  
If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation.

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Local exhaust ventilation may be necessary for some operations.

### Personal protective equipment

Respiratory protection : Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

Hand protection

Remarks : Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). 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.

Eye protection

: Use safety glasses (with side shields). If exposure causes eye discomfort, use a full-face respirator.

Skin and body protection

: Wear clean, body-covering clothing.

Protective measures

: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Liquid.
Colour	: Red to brown
Odour	: Sweet
Odour Threshold	: No data available
pH	: 7.5 - 8.0
Melting point/ range	: Not applicable
Freezing point	No data available
Boiling point/boiling range	: 100 °C
Flash point	: 47.2 °C
	Method: closed cup
Evaporation rate	: No data available

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Flammability (solid, gas)	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: 31.326 hPa (20 °C)
Relative vapour density	: 1.06 (20 °C )
Density	: 1.161 g/cm <sup>3</sup> (20 °C) Method: Calculated.
Solubility(ies)	
Water solubility	: Miscible with water
Partition coefficient: n-octanol/water	: No data available.
Auto-ignition temperature	: No data available
Viscosity	
Viscosity, dynamic	: 7 cP
Explosive properties	: No data available
Oxidizing properties	: No data available
Particle characteristics	
Particle size	: Not applicable

### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: No decomposition if stored and applied as directed. Stable under normal conditions.
Possibility of hazardous reactions	: Stable under recommended storage conditions. No hazards to be specially mentioned. Vapours may form explosive mixture with air. May form explosive dust-air mixture.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: None.
Hazardous decomposition products	: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Nitrogen oxides (NO <sub>x</sub> ) Hydrogen chloride gas Carbon oxides

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Product:

Acute oral toxicity	: LD <sub>50</sub> (Rat, male and female): > 5,000 mg/kg
Acute inhalation toxicity	: LC <sub>50</sub> (Rat, male and female): > 3.0 mg/l Exposure time: 4 h Test atmosphere: Aerosol

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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): > 5,000 mg/kg

### Components:

#### **Clopyralid monoethanolamine salt:**

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

Acute inhalation toxicity : LC50 (Rat): > 2.6 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
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

#### **propan-2-ol:**

Acute oral toxicity : LD50 (Rat): 5,840 mg/kg  
Method: OECD 401 or equivalent

Acute inhalation toxicity : LC50 (Rat, female): 19000 ppm  
Exposure time: 8 h  
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 12,800 mg/kg

#### **Alkylphenol alkoxylate:**

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

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg

### **Skin corrosion/irritation**

#### Product:

Species : Rabbit  
Result : No skin irritation

### Components:

#### **propan-2-ol:**

Species : Rabbit  
Result : No skin irritation

#### **Alkylphenol alkoxylate:**

Species : Rabbit  
Result : No skin irritation

### **Serious eye damage/eye irritation**

#### Product:

Species : Rabbit  
Result : No eye irritation



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### Components:

#### **Clopyralid monoethanolamine salt:**

Species	:	Rabbit
Result	:	No eye irritation

#### **propan-2-ol:**

Species	:	Rabbit
Result	:	Eye irritation

#### **Alkylphenol alkoxylate:**

Species	:	Rabbit
Result	:	No eye irritation

### **Respiratory or skin sensitisation**

#### Product:

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

### Components:

#### **Clopyralid monoethanolamine salt:**

Species	:	Mouse
Result	:	Does not cause skin sensitisation.

#### **propan-2-ol:**

Species	:	Guinea pig
Result	:	Does not cause skin sensitisation.

#### **Alkylphenol alkoxylate:**

Species	:	Guinea pig
Result	:	Does not cause skin sensitisation.

### **Germ cell mutagenicity**

#### Components:

#### **Clopyralid monoethanolamine salt:**

Germ cell mutagenicity - Assessment	:	In vitro genetic toxicity studies were negative., Animal genetic toxicity studies were negative.
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#### **propan-2-ol:**

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

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

#### Components:

#### **Clopyralid monoethanolamine salt:**

Carcinogenicity - Assessment	:	Similar formulations did not cause cancer in laboratory animals.
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#### **propan-2-ol:**

Carcinogenicity - Assessment	:	Did not cause cancer in laboratory animals.
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### **Reproductive toxicity**

#### Components:

#### **Clopyralid monoethanolamine salt:**

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Reproductive toxicity - Assessment : In animal studies, active ingredient did not interfere with reproduction.  
Clopyralid caused birth defects in test animals, but only at greatly exaggerated doses that were severely toxic to the mothers. No birth defects were observed in animals given clopyralid at doses several times greater than those expected during normal exposure.

### propan-2-ol:

Reproductive toxicity - Assessment : In animal studies, did not interfere with reproduction., In animal studies, did not interfere with fertility.  
Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

### Alkylphenol alkoxylate:

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

### STOT - single exposure

#### Product:

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

#### Components:

#### Clopyralid monoethanolamine salt:

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

### propan-2-ol:

Exposure routes : Ingestion  
Target Organs : Central nervous system  
Assessment : May cause drowsiness or dizziness.

### Alkylphenol alkoxylate:

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

### Repeated dose toxicity

#### Components:

#### Clopyralid monoethanolamine salt:

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

### propan-2-ol:

Remarks : In animals, effects have been reported on the following organs:  
Kidney.  
Liver.  
Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.  
Observations in animals include:  
Lethargy.

### Alkylphenol alkoxylate:

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

### Aspiration toxicity

#### Product:

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

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### Components:

#### **Clopyralid monoethanolamine salt:**

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

#### **propan-2-ol:**

Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems.

#### **Alkylphenol alkoxylate:**

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

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### **Clopyralid monoethanolamine salt:**

- |   |   |  |
|---|---|--|
| Toxicity to fish                                    | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l<br>Exposure time: 96 h<br>Test Type: static test<br>Method: OECD Test Guideline 203 or Equivalent   |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>Exposure time: 48 h<br>Test Type: static test<br>Method: OECD Test Guideline 202 or Equivalent  |
| Toxicity to algae/aquatic plants                    | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): 30 mg/l<br>Exposure time: 72 h<br><br>ErC50 (Myriophyllum spicatum): > 3 mg/l<br>Exposure time: 14 d<br>Remarks: For similar material(s):<br><br>NOEC (Myriophyllum spicatum): 0.0089 mg/l<br>Exposure time: 14 d<br>Remarks: For similar material(s):  |
| Toxicity to terrestrial organisms                   | : | oral LD50 (Anas platyrhynchos (Mallard duck)): 1465 - 2000 mg/kg bodyweight.<br>Exposure time: 14 d<br>Remarks: For similar active ingredient(s).<br><br>dietary LC50 (Colinus virginianus (Bobwhite quail)): > 5000 mg/kg diet.<br>Exposure time: 8 d<br>Remarks: For similar active ingredient(s).<br><br>contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee<br>Exposure time: 48 d<br>Remarks: For similar active ingredient(s).<br><br>oral LD50 (Apis mellifera (bees)): > 98.1 micrograms/bee<br>Exposure time: 48 d<br>Remarks: For similar active ingredient(s). |

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### propan-2-ol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9,640 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 : LC50 (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 24 h  
Test Type: static test  
Method: OECD Test Guideline 202 or Equivalent

Toxicity to algae/aquatic plants : NOEC (alga Scenedesmus sp.): 1,800 mg/l  
End point: Growth inhibition (cell density reduction)  
Exposure time: 7 d  
Test Type: static test  
  
ErC50 (alga Scenedesmus sp.): > 1,000 mg/l  
End point: Growth rate inhibition  
Exposure time: 72 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 30 mg/l  
Exposure time: 21 d  
Test Type: semi-static test

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l

### Alkylphenol alkoxylate:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 4.8 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203 or Equivalent

LC50 (Oncorhynchus mykiss (rainbow trout)): 3.7 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)): 10.5 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202 or Equivalent

Toxicity to terrestrial organisms : dietary LC50 (Apis mellifera (bees)): > 105 micrograms/bee  
Exposure time: 2 d

contact LD50 (Apis mellifera (bees)): > 100 micrograms/bee  
Exposure time: 2 d

No Observed Effects Level (NOEL) (Colinus virginianus (Bobwhite quail)): 2,250 mg/kg

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

### Ecotoxicology Assessment

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

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### Persistence and degradability

#### Components:

##### **Clopyralid monoethanolamine salt:**

Biodegradability : Result: Not biodegradable  
Remarks: For similar active ingredient(s).  
Clopyralid.

##### **propan-2-ol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 95 %  
Exposure time: 21 d  
Method: OECD Test Guideline 301E or Equivalent  
Remarks: 10-day Window: Pass

Biochemical Oxygen Demand (BOD) : 20 - 72 %  
Incubation time: 5 d  
  
78 - 86 %  
Incubation time: 20 d

Chemical Oxygen Demand (COD) : 2.09 kg/kg  
Method: Estimated.

ThOD : 2.40 kg/kg  
Method: Estimated.

Photodegradation : Test Type: Half-life (indirect photolysis)  
Sensitiser: OH radicals  
Rate constant: 7.26E-12 cm<sup>3</sup>/s  
Method: Estimated.

##### **Alkylphenol alkoxyate:**

Biodegradability : Result: Not biodegradable  
Remarks: Biodegradation under aerobic laboratory conditions is below detectable limits (BOD<sub>20</sub> or BOD<sub>28</sub>/ThOD < 2.5%). 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.

Chemical Oxygen Demand (COD) : 1.78 kg/kg  
ThOD : 2.35 kg/kg

### Bioaccumulative potential

#### Components:

##### **Clopyralid monoethanolamine salt:**

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

##### **propan-2-ol:**

Partition coefficient: n-octanol/water : Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).  
  
log Pow: 0.05  
Method: Measured

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### Alkylphenol alkoxylate:

Partition coefficient: n-octanol/water : Remarks: No bioconcentration is expected because of the relatively high water solubility.  
May foam in water.

### Balance:

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

### Mobility in soil

#### Components:

#### Clopyralid monoethanolamine salt:

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

### propan-2-ol:

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

Koc: 1.1  
Method: Estimated.

### Balance:

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

### Other adverse effects

#### Components:

#### Clopyralid monoethanolamine salt:

Results of PBT and vPvB 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).

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

### propan-2-ol:

Results of PBT and vPvB 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).

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

### Alkylphenol alkoxylate:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

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

### Balance:

Results of PBT and vPvB assessment : This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

Ozone-Depletion Potential : 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

#### Disposal methods

Waste from residues : 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.

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

UN number : UN 1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Isopropanol)  
Class : 3  
Packing group : III  
Labels : 3  
Environmentally hazardous : yes

##### IATA-DGR

UN/ID No. : UN 1993  
Proper shipping name : Flammable liquid, n.o.s.  
(Isopropanol)  
Class : 3  
Packing group : III  
Labels : Flammable Liquids  
Packing instruction (cargo aircraft) : 366  
Packing instruction (passenger aircraft) : 355

##### IMDG-Code

UN number : UN 1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Isopropanol, Clopyralid monoethanolamine salt)  
Class : 3  
Packing group : III  
Labels : 3  
EmS Code : F-E, S-E  
Marine pollutant : yes(Clopyralid monoethanolamine salt)  
Remarks : Stowage category A

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### National Regulations

##### TDG

UN number : UN 1993  
Proper shipping name : FLAMMABLE LIQUID, N.O.S.  
(Isopropanol)  
Class : 3

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Packing group	:	III
Labels	:	3
ERG Code	:	128
Marine pollutant	:	yes(Clopyralid monoethanolamine salt)

### Further information

EXEMPTED PER TDG 1.33 FOR ROAD OR RAIL SHIPMENTS 450L OR LESS.

### Special precautions for user

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.

## SECTION 15. REGULATORY INFORMATION

### The components of this product are reported in the following inventories:

DSL : This product contains components that are not listed on the Canadian DSL nor NDSL.

Pest Control Products Act ( PCPA ) Registration Number : 23545

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

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act (PCPA). There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control products label:

PCPA Label Hazard Communications:

Read the label and booklet before using. Keep out of reach of children.

CAUTION POISON

DANGER EYE IRRITANT

HARMFUL IF ABSORBED THROUGH SKIN.

MAY CAUSE SKIN IRRITATION

This product is toxic to:  
Non-target terrestrial plants

## 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 other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants



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ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / STEL	:	15-minute occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA BC OEL / STEL	:	short-term exposure limit
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; ECx - Concentration associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; 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; NOEC - Non-Observed Effective Concentration; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; (Q)SAR - (Quantitative) Structure Activity Relationship; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SDS - Safety Data Sheet; UN - United Nations.

DSL - Domestic substances List. WHMIS - Workplace Hazardous Materials Information System.

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Product code: XRM-3972

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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