



Thawzone**SECTION 1: IDENTIFICATION**

- 1.1 Product identifier:** Thawzone
Other means of identification:
17001, 17002, 17004, 17016, 17022
- 1.2 Recommended use of the chemical and restrictions on use:**
Application of the substance / the preparation Liquid De-hydrant
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:**
Highside Chemicals, Inc.
11114 Reichold Rd.
39503 Gulfport - Mississippi - United States
Phone: 228-896-9220, 800-359-5599
- 1.4 Emergency phone number:** ChemTel Inc. (800)255-3924, +1 (813)248-0585

SECTION 2: HAZARD(S) IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
NFPA:
Health Hazards: 0
Flammability Hazards: 3
Instability Hazards: 0
Special Hazards: Not applicable (N/A)
- In Accordance With: 29 CFR 1910.1200:**
Classification of this product has been carried out in accordance with paragraph (d) of § 1910.1200.
Flam. Liq. 2: Flammable liquids, Category 2, H225
- In Accordance With: CLP Regulation (EC) No 1272/2008:**
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
Flam. Liq. 2: Flammable liquids, Category 2, H225
- In Accordance With: WHMIS 2015:**
Classification of this product has been carried out in accordance with Part 2 of Hazardous Products Regulations (SOR/2015-17)
Flam. Liq. 2: Flammable liquids, Category 2, H225
- 2.2 Label elements:**
NFPA:
- 
- In Accordance With: 29 CFR 1910.1200 / CLP Regulation (EC) No 1272/2008 / WHMIS 2015**
Danger
- 
- Hazard statements:**
Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

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SECTION 2: HAZARD(S) IDENTIFICATION (continued)

2.2 Label elements:

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting/equipment.
P280: Wear protective gloves/protective clothing/eye protection/protective footwear.
P370+P378: In case of fire: Use ABC powder extinguisher to put it out.
P403+P235: Store in a well-ventilated place. Keep cool.
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

2.3 Hazards not otherwise classified (HHNOC - PHNOC):

In Accordance With: 29 CFR 1910.1200 / WHMIS 2015

Not applicable (N/A)

In Accordance With: COMMISSION REGULATION (EU) 2020/878

Product fails to meet PBT/vPvB criteria
Endocrine-disrupting properties: The product fails to meet the criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Non-applicable


3.2 Mixtures:

In Accordance With: 29 CFR 1910.1200

Chemical description: Mixture composed of chemical products

Components:



Remaining components are non-hazardous and/or present at amounts below reportable limits. The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. Therefore, in accordance with Appendix D to § 1910.1200, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 67-63-0	propan-2-ol Eye Irrit. 2A: H319; Flam. Liq. 2: H225; STOT SE 3: H336 - Danger	 2.5 - <10 %

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

In Accordance With: COMMISSION REGULATION (EU) 2020/878

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 67-63-0 EC: 200-661-7 Index: 603-117-00-0 REACH: 01-2119457558-25-XXXX	propan-2-ol⁽¹⁾ Regulation 1272/2008 Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336 - Danger	ATP CLP00  2.5 - <10 %
CAS: 141-43-5 EC: 205-483-3 Index: 603-030-00-8 REACH: 01-2119486455-28-XXXX	2-aminoethanol⁽²⁾ Regulation 1272/2008 Acute Tox. 4: H302+H312+H332; Skin Corr. 1B: H314 - Danger	ATP CLP00  <1 %

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2020/878

⁽²⁾ Substance with a Union workplace exposure limit

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

3.2 Mixtures:


To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Other information:

Identification	Specific concentration limit
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	% (w/w) >=5: STOT SE 3 - H335

In Accordance With: WHMIS 2015

In accordance with Schedule I of the Hazardous Products Regulations (SOR/2015-17), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 67-63-0	propan-2-ol Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336 - Danger	 5 - <10 %

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST-AID MEASURES

4.1 Description of necessary measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

This product is not classified as hazardous through inhalation, however, it is recommended in case of intoxication symptoms to remove the person affected from the area of exposure, provide clean air and keep at rest. Request medical attention if symptoms persist.

By skin contact:

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of changes to the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Safety Data Sheet

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.

By ingestion/aspiration:

In case of consumption, seek immediate medical assistance showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

4.2 Most important symptoms/effects, acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Not applicable (N/A)

Thawzone**SECTION 5: FIRE-FIGHTING MEASURES****5.1 Suitable (and unsuitable) extinguishing media:****Suitable extinguishing media:**

If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO₂).

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Specific hazards arising from the chemical:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Special protective equipment and precautions for fire-fighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:**In Accordance With: 29 CFR 1910.1200**

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Only properly trained personnel should be involved in firefighting. Evacuate nonessential personnel from the fire area. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

In Accordance With: COMMISSION REGULATION (EU) 2020/878 / WHMIS 2015

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures:****For non-emergency personnel:**

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

Wear protective equipment. Keep unprotected persons away. See section 8.

6.2 Environmental precautions:

This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

6.3 Methods and materials for containment and cleaning up:**In Accordance With: 29 CFR 1910.1200**

For accidental releases in excess of reportable quantities (RQ) (Table 302.4), refer to 40 CFR 302 for detailed instructions concerning reporting requirements and notify the National Response Center (800) 424-8802.

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

In Accordance With: COMMISSION REGULATION (EU) 2020/878 / WHMIS 2015

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

Thawzone**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling:**

A.- General precautions for safe use

Comply with the current legislation and/or standards of 29 CFR 1910 Occupational Safety and Health Standards. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Because the product is a flammable liquid, storage should meet the requirement of 29 CFR 1910.106, Flammable and Combustible Liquids Code.

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,...) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertization systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems (COMMISSION REGULATION (EU) 2020/878 as defined in Directive 2014/34/EC (ATEX 100)) and with the minimum requirements for protecting the security and health of workers (COMMISSION REGULATION (EU) 2020/87 under the selection criteria of Directive 1999/92/EC (ATEX 137)). Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities: In Accordance With: 29 CFR 1910.1200

A.- Technical measures for storage

Minimum Temp.: 41 °F

Maximum Temp.: 86 °F

Maximum time: 6 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

In Accordance With: COMMISSION REGULATION (EU) 2020/878 / WHMIS 2015

A.- Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

Maximum time: 6 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters: In Accordance With: 29 CFR 1910.1200

Substances whose occupational exposure limits have to be monitored in the workplace:

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000):

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	8-hour TWA PEL	400 ppm
	Ceiling Values - TWA PEL		

US. ACGIH Threshold Limit Values (2022):

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	TLV-TWA	200 ppm
	TLV-STEL	400 ppm	

CALIFORNIA- TABLE AC-1 PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS:

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	PEL	400 ppm
	STEL	500 ppm	1225 mg/m ³

Biological limit values:

Biological Exposure Indices (BEIs®) - ACGIH

Identification	BEIs®	Determinant	Sampling Time
propan-2-ol CAS: 67-63-0	40 mg/L	Acetone in urine	End of shift at end of workweek

Control parameters: In Accordance With: WHMIS 2015

Substances whose occupational exposure limits have to be monitored in the workplace:

British Columbia - Occupational Health and Safety Regulation section 5.48 (Updated March 1, 2022):

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	TLV-TWA	200 ppm
	TLV-STEL	400 ppm	

ALBERTA - Occupational Health and Safety Code:

Identification	Occupational exposure limits		
	propan-2-ol CAS: 67-63-0	8-hour	200 ppm
	15-minute	400 ppm	984 mg/m ³

Control parameters: In Accordance With: COMMISSION REGULATION (EU) 2020/878

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
	2-aminoethanol CAS: 141-43-5 EC: 205-483-3	IOELV (8h)	1 ppm
	IOELV (STEL)	3 ppm	7,6 mg/m ³

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

8.1 Control parameters: In Accordance With: COMMISSION REGULATION (EU) 2020/878

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
propan-2-ol CAS: 67-63-0 EC: 200-661-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	888 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	500 mg/m ³	Non-applicable
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	1 mg/m ³	0,51 mg/m ³

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
propan-2-ol CAS: 67-63-0 EC: 200-661-7	Oral	Non-applicable	Non-applicable	26 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	319 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	89 mg/m ³	Non-applicable
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	Oral	Non-applicable	Non-applicable	1,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,18 mg/m ³	0,28 mg/m ³

PNEC:

Identification				
propan-2-ol CAS: 67-63-0 EC: 200-661-7	STP	2251 mg/L	Fresh water	140,9 mg/L
	Soil	28 mg/kg	Marine water	140,9 mg/L
	Intermittent	140,9 mg/L	Sediment (Fresh water)	552 mg/kg
	Oral	0,16 g/kg	Sediment (Marine water)	552 mg/kg
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	STP	100 mg/L	Fresh water	0,07 mg/L
	Soil	1,29 mg/kg	Marine water	0,007 mg/L
	Intermittent	0,028 mg/L	Sediment (Fresh water)	0,357 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,036 mg/kg

8.2 Appropriate engineering controls / Exposure Controls:

A.- Individual protection measures, such as personal protective equipment

As a preventative measure it is recommended to use basic Personal Protection Equipment (where applicable with the corresponding <<CE marking>> in accordance with Regulation (EU) 2016/425). For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation, the information on clothing performance must be combined with professional judgment, and a clear understanding of the clothing application, to provide the best protection to the worker. All chemical protective clothing use must be based on a hazard assessment to determine the risks for exposure to chemicals and other hazards. Conduct hazard assessments in accordance with 29 CFR 1910.132.

B.- Respiratory protection


The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)



8.2 Appropriate engineering controls / Exposure Controls:

C.- Specific protection for the hands In Accordance With: 29 CFR 1910.1200 / WHMIS 2015

Pictogram	PPE	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)	The Breakthrough Time indicated by the manufacturer must exceed the period during which the product is being used. Do not use protective creams after the product has come into contact with skin. Use gloves in accordance with manufacturer's use limitations and OSHA standard 1910.138 (29CFR)


As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

In Accordance With: COMMISSION REGULATION (EU) 2020/878



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves (Material: Linear low-density polyethylene (LLDPE), Breakthrough time: > 480 min, Thickness: 0.062 mm)		EN ISO 21420:2020	Replace the gloves at any sign of deterioration.

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.

D.- Eye and face protection In Accordance With: 29 CFR 1910.1200 / WHMIS 2015

Pictogram	PPE	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing. Use this PPE in accordance with manufacturer's use limitations and OSHA standard 1910.133 (29CFR)

In Accordance With: COMMISSION REGULATION (EU) 2020/878

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Bodily protection In Accordance With: 29 CFR 1910.1200 / WHMIS 2015



Pictogram	PPE	Remarks
	Work clothing	Replace before any evidence of deterioration.
	Anti-slip work shoes	Replace before any evidence of deterioration.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

8.2 Appropriate engineering controls / Exposure Controls:

In Accordance With: **COMMISSION REGULATION (EU) 2020/878**

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing			Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes		EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

40 CFR Part 59 (VOC):

V.O.C.(weight-percent):	100 % weight
V.O.C. at 68 °F:	791.6 kg/m ³ (791.6 g/L)

California Air Resources Board (CARB) - VOC Regulatory:

V.O.C.(weight-percent):	100 % weight
V.O.C. at 68 °F:	791.6 kg/m ³ (791.6 g/L)

South Coast Air Quality Management District (AQMD) - VOC Regulatory:

V.O.C.(weight-percent):	100 % weight
V.O.C. at 68 °F:	791.6 kg/m ³ (791.6 g/L)

Ozone Transport Commission (OTC) Rules - VOC Regulatory:

V.O.C.(weight-percent):	100 % weight
V.O.C. at 68 °F:	791.6 kg/m ³ (791.6 g/L)

Volatile organic compounds (VOC) according to Canadian Environmental Protection Act, 1999:

Volatile organic compounds:	100 % weight
V.O.C. density at 20 °C:	791.6 kg/m ³ (791.6 g/L)

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	100 % weight
V.O.C. density at 20 °C:	791,6 kg/m ³ (791,6 g/L)
Average carbon number:	2,11
Average molecular weight:	47,62 g/mol

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 68 °F / 20 °C	Liquid
Appearance:	Not available
Color:	Not available
Odor:	Not available
Odour threshold:	Not applicable (N/A) *

Volatility:

Boiling point at atmospheric pressure:	174 °F / 79 °C
Vapour pressure at 68 °F / 20 °C	6456 Pa
Vapour pressure at 122 °F / 50 °C	30377.86 Pa (30.38 kPa)
Evaporation rate at 68 °F / 20 °C	Not applicable (N/A) *

Product description:

Density at 68 °F / 20 °C	791.6 kg/m ³
Relative density at 68 °F / 20 °C	0.792
Dynamic viscosity at 68 °F / 20 °C	1.22 cP
Kinematic viscosity at 68 °F / 20 °C	1.54 mm ² /s
Kinematic viscosity at 104 °F / 40 °C	Not applicable (N/A) *
Concentration:	Not applicable (N/A) *
pH:	Not applicable (N/A) *
Vapour density at 68 °F / 20 °C:	Not applicable (N/A) *
Partition coefficient n-octanol/water 68 °F / 20 °C	Not applicable (N/A) *
Solubility in water at 68 °F / 20 °C:	Not applicable (N/A) *
Solubility properties:	Not applicable (N/A) *
Decomposition temperature:	Not applicable (N/A) *
Melting point/freezing point:	Not applicable (N/A) *

Flammability:

Flash Point:	55 °F / 13 °C
Flammability (solid, gas):	Not applicable (N/A) *
Autoignition temperature:	650 °F / 343 °C
Lower flammability limit:	Not available
Upper flammability limit:	Not available

Particle characteristics:

Median equivalent diameter:	Non-applicable
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*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties: Non-applicable *

Oxidising properties: Non-applicable *

Corrosive to metals: Non-applicable *

Heat of combustion: 25.9 kJ/g

Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

Surface tension at 68 °F / 20 °C: Non-applicable *

Refraction index: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Risk of combustion	Avoid direct impact	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects and hazard classes as defined in Regulation (EC) No 1272/2008:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for consumption. For more information see section 3
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

B- Inhalation (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for skin contact. For more information see section 3.
- Contact with the eyes: Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
 IARC: Ethanol (1); propan-2-ol (3)
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met. However, it contains substances classified as hazardous for inhalation. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Not applicable (N/A)

Specific toxicology information on the substances: In Accordance With: 29 CFR 1910.1200 / WHMIS 2015

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
propan-2-ol CAS: 67-63-0	LD50 oral	5280 mg/kg	Rat
	LD50 dermal	12800 mg/kg	Rat
	LC50 inhalation	72.6 mg/L (4 h)	Rat

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

11.1 Information on toxicological effects and hazard classes as defined in Regulation (EC) No 1272/2008:

In Accordance With: COMMISSION REGULATION (EU) 2020/878

Identification	Acute toxicity		Genus
	Route	Value	
propan-2-ol CAS: 67-63-0 EC: 200-661-7	LD50 oral	5280 mg/kg	Rat
	LD50 dermal	12800 mg/kg	Rat
	LC50 inhalation	72,6 mg/L (4 h)	Rat
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	LD50 oral	1089 mg/kg	Rat
	LD50 dermal	1100 mg/kg	
	LC50 inhalation	Non-applicable	

11.2 Information on other hazards:

Endocrine disrupting properties

Endocrine-disrupting properties: The product fails to meet the criteria.

Other information

Non-applicable

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity (aquatic and terrestrial, where available): In Accordance With: 29 CFR 1910.1200 / WHMIS 2015

Product-specific aquatic toxicity:

Acute toxicity	Species	Genus
LC50 10269.33 mg/L (96 h)	Non-applicable	Fish
EC50 8203.04 mg/L (48 h)	Non-applicable	Crustacean
EC50 1295.64 mg/L (72 h)	Non-applicable	Algae

Substance-specific aquatic toxicity:

Acute toxicity:

Identification	Concentration	Species	Genus
propan-2-ol CAS: 67-63-0	LC50 9640 mg/L (96 h)	Pimephales promelas	Fish
	EC50 13299 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 1000 mg/L (72 h)	Scenedesmus subspicatus	Algae

In Accordance With: COMMISSION REGULATION (EU) 2020/878

Product-specific aquatic toxicity:

Acute toxicity	Species	Genus
LC50 10269,33 mg/L (96 h)	Non-applicable	Fish
EC50 8203,04 mg/L (48 h)	Non-applicable	Crustacean
EC50 1295,64 mg/L (72 h)	Non-applicable	Algae

Substance-specific aquatic toxicity:

Acute toxicity:

Identification	Concentration	Species	Genus
propan-2-ol CAS: 67-63-0 EC: 200-661-7	LC50 9640 mg/L (96 h)	Pimephales promelas	Fish
	EC50 13299 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 1000 mg/L (72 h)	Scenedesmus subspicatus	Algae
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	LC50 349 mg/L (96 h)	Cyprinus carpio	Fish
	EC50 65 mg/L (48 h)	Daphnia magna	Crustacean
	EC50 22 mg/L (72 h)	Scenedesmus subspicatus	Algae

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SECTION 12: ECOLOGICAL INFORMATION (continued)

12.1 Ecotoxicity (aquatic and terrestrial, where available):

Chronic toxicity:

Identification	Concentration		Species	Genus
	NOEC			
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	NOEC	1,24 mg/L	Oryzias latipes	Fish
	NOEC	0,85 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Substance-specific information: In Accordance With: 29 CFR 1910.1200 / WHMIS 2015

Identification	Degradability		Biodegradability	
propan-2-ol CAS: 67-63-0	BOD5	1.19 g O2/g	Concentration	100 mg/L
	COD	2.23 g O2/g	Period	14 days
	BOD5/COD	0.53	% Biodegradable	86 %

Substance-specific information: In Accordance With: COMMISSION REGULATION (EU) 2020/878

Identification	Degradability		Biodegradability	
propan-2-ol CAS: 67-63-0 EC: 200-661-7	BOD5	1,19 g O2/g	Concentration	100 mg/L
	COD	2,23 g O2/g	Period	14 days
	BOD5/COD	0,53	% Biodegradable	86 %
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	BOD5	Non-applicable	Concentration	20 mg/L
	COD	Non-applicable	Period	21 days
	BOD5/COD	Non-applicable	% Biodegradable	90 %

12.3 Bioaccumulative potential:

Substance-specific information: In Accordance With: 29 CFR 1910.1200 / WHMIS 2015

Identification	Bioaccumulation potential	
propan-2-ol CAS: 67-63-0	BCF	3
	Pow Log	0.05
	Potential	Low

Substance-specific information: In Accordance With: COMMISSION REGULATION (EU) 2020/878

Identification	Bioaccumulation potential	
propan-2-ol CAS: 67-63-0 EC: 200-661-7	BCF	3
	Pow Log	0.05
	Potential	Low
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	BCF	3
	Pow Log	-1.31
	Potential	Low

12.4 Mobility in soil: In Accordance With: 29 CFR 1910.1200 / WHMIS 2015

Identification	Absorption/desorption		Volatility	
propan-2-ol CAS: 67-63-0	Koc	1.5	Henry	8.207E-1 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2.24E-2 N/m (77 °F)	Moist soil	Yes

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Mobility in soil: In Accordance With: COMMISSION REGULATION (EU) 2020/878

Identification	Absorption/desorption		Volatility	
propan-2-ol CAS: 67-63-0 EC: 200-661-7	Koc	1.5	Henry	8,207E-1 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	Yes
	Surface tension	2,24E-2 N/m (25 °C)	Moist soil	Yes
2-aminoethanol CAS: 141-43-5 EC: 205-483-3	Koc	0.27	Henry	3,7E-5 Pa·m ³ /mol
	Conclusion	Very High	Dry soil	No
	Surface tension	5,025E-2 N/m (25 °C)	Moist soil	No

12.5 Results of PBT and vPvB assessment:

Non-applicable / Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects / Endocrine disrupting properties:

Not described / Endocrine-disrupting properties: The product fails to meet the criteria.

12.7 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods: In Accordance With: 29 CFR 1910.1200

The characteristic of Ignitability per RCRA could apply to the unused product if it becomes a waste material. The EPA hazardous waste number D001 could apply.

Waste management (disposal and evaluation):

Follow RCRA framework and EPA regulation for to ensure that hazardous waste is managed safely and properly. Waste should not be disposed of to drains. Remind, It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristics or listing. See section 6 for further information about Accidental release measures.

Regulations related to waste management:

Legislation related to waste management:

40 CFR Solid Wastes - Part 239 through 282.

State regulatory requirements for generators may be more stringent than those in the federal program. Be sure to check the state's policies.

In Accordance With: COMMISSION REGULATION (EU) 2020/878

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP3 Flammable

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

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SECTION 13: DISPOSAL CONSIDERATIONS (continued)

13.1 Disposal methods: In Accordance With: WHMIS 2015

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations. In case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See epigraph 6.2.

Regulations related to waste management:

Legislation related to waste management:

Canadian Environmental Protection Act, 1999

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to 49 CFR on the Transport of Dangerous Goods AND With regard to ADR 2021 and RID 2021
 Transportation of Dangerous Goods Regulations including Amendment SOR/2017-100



- 14.1 UN number:** UN1170
14.2 UN proper shipping name: ETHANOL (ETHYL ALCOHOL)
14.3 Transport hazard class(es): 3
 Labels: 3
14.4 Packing group, if applicable: II
14.5 Marine pollutant: No
14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises
 Special regulations: 144, 601
 Tunnel restriction code: D/E
 Physico-Chemical properties: see section 9
 Limited quantities: 1 L
14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable (N/A)

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



- 14.1 UN number:** UN1170
14.2 UN proper shipping name: ETHANOL (ETHYL ALCOHOL)
14.3 Transport hazard class(es): 3
 Labels: 3
14.4 Packing group, if applicable: II
14.5 Marine pollutant: No
14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises
 Special regulations: 144
 EmS Codes: F-E, S-D
 Physico-Chemical properties: see section 9
 Limited quantities: 1 L
 Segregation group: Not applicable (N/A)
14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable (N/A)

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SECTION 14: TRANSPORT INFORMATION (continued)

Transport of dangerous goods by air:

With regard to IATA/ICAO 2023:



- | | |
|--|-------------------------|
| 14.1 UN number: | UN1170 |
| 14.2 UN proper shipping name: | ETHANOL (ETHYL ALCOHOL) |
| 14.3 Transport hazard class(es): | 3 |
| Labels: | 3 |
| 14.4 Packing group, if applicable: | II |
| 14.5 Marine pollutant: | No |
| 14.6 Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises | |
| Physico-Chemical properties: | see section 9 |
| 14.7 Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): | Not applicable (N/A) |

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

In Accordance With: 29 CFR 1910.1200

- CALIFORNIA LABOR CODE - The Hazardous Substances List: *propan-2-ol (67-63-0)*
 - California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Birth defects or other reproductive harm: Not applicable (N/A)
 - California Proposition 65 (the Safe Drinking Water and Toxic Enforcement Act of 1986) - Cancer: Not applicable (N/A)
 - CANADA-Domestic Substances List (DSL): *propan-2-ol (67-63-0)*
 - CANADA-Non-Domestic Substances List (NDSL): Not applicable (N/A)
 - Hazardous Air Pollutants (Clean Air Act): Not applicable (N/A)
 - Massachusetts RTK - Substance List: *propan-2-ol (67-63-0)*
 - Minnesota - Hazardous substances ERTK: *propan-2-ol (67-63-0)*
 - New Jersey Worker and Community Right-to-Know Act: *propan-2-ol (67-63-0)*
 - New York RTK - Substance list: *propan-2-ol (67-63-0)*
 - NTP (National Toxicology Program): Not applicable (N/A)
 - OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096): Not applicable (N/A)
 - Pennsylvania Worker and Community Right-to-Know Law: *propan-2-ol (67-63-0)*
 - Rhode Island - Hazardous substances RTK: Not applicable (N/A)
 - The Toxic Substances Control Act (TSCA) : *propan-2-ol (67-63-0)*
 - Toxic chemical release reporting under EPCRA section 313 (40 CFR Part 372): *propan-2-ol (67-63-0)*
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantities: Not applicable (N/A)

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Take into consideration other applicable federal, state, and local laws and local regulations.

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SECTION 15: REGULATORY INFORMATION (continued)

**Safety, health and environmental regulations/legislation specific for the substance or mixture:
 In Accordance With: COMMISSION REGULATION (EU) 2020/878**

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
 Article 95, REGULATION (EU) No 528/2012: propan-2-ol (Product-type 1, 2, 4)
 REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
P5c	FLAMMABLE LIQUIDS	5000	50000

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Shall not be used in:
 —ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 —tricks and jokes,
 —games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

**Safety, health and environmental regulations/legislation specific for the substance or mixture:
 In Accordance With: WHMIS 2015**

- Domestic Substances List (DSL): *propan-2-ol (67-63-0)*
- Non-Domestic Substances List (NDSL): Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Canadian Environmental Protection Act, 1999

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Appendix d to §1910.1200 - Safety data sheets

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (COMMISSION REGULATION (EU) 2020/878).

This safety data sheet has been designed in accordance with Part 4 and Schedule I of the Hazardous Products Regulations (SOR/2015-17)

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

Thawzone**SECTION 16: OTHER INFORMATION (continued)****Texts of the legislative phrases mentioned in section 2:**

H225: Highly flammable liquid and vapour.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

In Accordance With: 29 CFR 1910.1200 / WHMIS 2015:

Eye Irrit. 2A: H319 - Causes serious eye irritation.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

STOT SE 3: H336 - May cause drowsiness or dizziness.

In Accordance With: CLP Regulation (EC) No 1272/2008:

Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.

Eye Irrit. 2: H319 - Causes serious eye irritation.

Flam. Liq. 2: H225 - Highly flammable liquid and vapour.

Skin Corr. 1B: H314 - Causes severe skin burns and eye damage.

STOT SE 3: H336 - May cause drowsiness or dizziness.

Classification procedure:

Flam. Liq. 2: Calculation method (2.6.4.3)

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

Occupational Safety & Health Administration (OSHA).

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

<http://whmis.org/>

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road

IMDG: International maritime dangerous goods code

IATA: International Air Transport Association

ICAO: International Civil Aviation Organisation

COD: Chemical Oxygen Demand

BOD5: 5-day biochemical oxygen demand

BCF: Bioconcentration factor

LD50: Lethal Dose 50

CL50/LC50: Lethal Concentration 50

EC50: Effective concentration 50

Log-POW: Octanol-water partition coefficient

Koc: Partition coefficient of organic carbon

UFI: unique formula identifier

IARC: International Agency for Research on Cancer

Date of compilation: 5/11/2023

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END OF SAFETY DATA SHEET