

# Safety Data Sheet (SDS)

## Section 1: Chemical Product and Company Identification

**Cat # 190 Proof** –V1116, V1116G, V1101, V1101G, V1105, V1105HC, V1105M, V1105SG, V1155, V1155M

**Part Name:** Koptec Ethanol, 190 Proof

**Supplier:** DLI

460 Glennie Circle King of Prussia, Pa 19406  
SDS Telephone # (610) 755-0800

### Emergency Telephone Numbers

US Chemtrec: (800) 424-9300

Canada: (703) 527-3887

**Identified uses:** Laboratory use

## Section 2: Hazards Identification:

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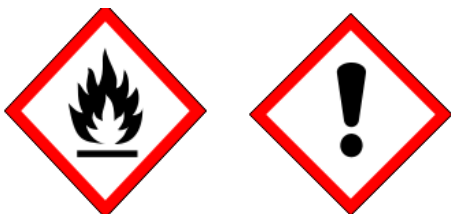
### GHS Classification

Flammable Liquids, Category 2 H225

Eye Irritation, Category 2A H319

Full text of H-phrases: see section 16

**Signal Word: DANGER**



### Hazard and Precautionary Statements

H225	Highly Flammable liquid and vapor.
H319	Causes serious eye irritation.
P210	Keep away from heat, sparks, open flames and hot surfaces - no smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303/361/353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water.
P305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P337+313:	If eye irritation persists get medical advice/attention.
P403 + P235	Store in a well-ventilated place. Keep cool.
P243	Take precautionary measures against static discharge.

# Safety Data Sheet (SDS)

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P241 Use explosion-proof electrical/ventilating/lighting equipment.  
P370 + 378 In case of fire: Use appropriate extinguishing media (See Section 5).  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations

## **Other Hazards**

**Other Hazards Not Contributing to the Classification:** Flammable vapors can accumulate in head space of closed systems.

**Unknown Acute Toxicity (GHS-US)** Not available

## **NFPA Rating**

Hazard Ratings:

These ratings are DLI's own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and list 49).

If no data is listed the information is not available

Health 1                  Flammability 3                  Reactivity 0

## **Section 3: Composition/ Information on ingredients**

Note: Items listed with a CASRN number have no CAS# available

### **Mixture**

<b>Name</b>	<b>Product identifier</b>	<b>% (w/w)</b>	<b>GHS-US classification</b>
Ethyl alcohol	(CAS No) 64-17-5 (EC no) 200-578-6	92.3 - 94.6	Flam. Liq. 2,
Water	(CAS No) 7732-18-5 (EC no) 231-791-2	5.4 - 7.7	Not classified

## **Section 4: First Aid Measures**

### **Description of First Aid Measures**

**General:** Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical advice/attention.

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area.

# Safety Data Sheet (SDS)

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**Skin Contact:** Remove contaminated clothing. Rinse immediately with large amounts of water. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**Ingestion:** Get medical advice and attention if you feel unwell. Rinse mouth. Do NOT induce vomiting.

## **Most Important Symptoms and Effects Both Acute and Delayed**

**General:** Causes serious eye irritation.

**Inhalation:** Prolonged exposure to liquid may cause a mild irritation.

**Skin Contact:** Repeated or prolonged skin contact may cause dermatitis and defatting.

**Eye Contact:** Causes serious eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.

**Ingestion:** Ingestion of this product is extremely harmful to human health. Nausea and vomiting, higher exposure causes unconsciousness.

**Chronic Symptoms:** None expected under normal conditions of use.

## **Indication of Any Immediate Medical Attention and Special Treatment Needed**

If medical advice is needed, have product container or label at hand.

## **Section 5: Fire-Fighting Measures**

### **Extinguishing Media**

**Suitable Extinguishing Media:** Alcohol-resistant foam, carbon dioxide, dry chemical, water spray, fog.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. A heavy water stream may spread burning liquid. Water may be ineffective because it may not cool material below its flash point.

### **Special Hazards Arising From the Substance or Mixture**

**Fire Hazard:** Highly flammable liquid and vapor.

**Explosion Hazard:** May form flammable/explosive vapor-air mixture. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

**Reactivity:** Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion.

### **Advice for Firefighters**

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon oxides (CO, CO<sub>2</sub>).

# Safety Data Sheet (SDS)

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## Reference to Other Sections

Refer to section 9 for flammability properties.

## Section 6: Accidental Release measures

### **Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Use special care to avoid static electric charges. Keep away from heat, sparks, open flames, hot surfaces. – No smoking. Avoid all eyes and skin contact and do not breathe vapor and mist.

### **For Non-Emergency Personnel**

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

### **For Emergency Personnel**

**Protective Equipment:** Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE). **Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. **Environmental Precautions**  
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### **Methods and Material for Containment and Cleaning Up**

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. **Methods for Cleaning Up:** Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

### **Reference to Other Sections**

See Heading 8. Exposure controls and personal protection.

## Section 7: Handling and Storage

### **Precautions for Safe Handling**

**Additional Hazards When Processed:** Handle empty containers with care because residual vapors are flammable.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

### **Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, lighting, ventilating equipment.

**Storage Conditions:** Store in a dry, cool, and well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container closed when not in use. Keep

# Safety Data Sheet (SDS)

in fireproof place.

**Incompatible Materials:** Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.

**Specific End Use(s)**

Solvent.

<b>Section 8: Exposure Controls / Personal Protection</b>
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**Control Parameters**

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

<b>Ethyl Alcohol (64-17-5)</b>		
<b>Mexico</b>	OEL TWA (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
<b>Mexico</b>	OEL TWA (ppm)	1000 ppm
<b>USA ACGIH</b>	ACGIH STEL (ppm)	1000 ppm
<b>USA ACGIH</b>	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
<b>USA OSHA</b>	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL (TWA) (ppm)	1000 ppm
<b>USA NIOSH</b>	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL (TWA) (ppm)	1000 ppm
<b>USA IDLH</b>	US IDLH (ppm)	3300 ppm (10% LEL)
<b>Alberta</b>	OEL TWA (mg/m <sup>3</sup> )	1880 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA (ppm)	1000 ppm
<b>British Columbia</b>	OEL STEL (ppm)	1000 ppm
<b>Manitoba</b>	OEL STEL (ppm)	1000 ppm
<b>New Brunswick</b>	OEL TWA (mg/m <sup>3</sup> )	1880 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA (ppm)	1000 ppm
<b>Newfoundland &amp;</b>	OEL STEL (ppm)	1000 ppm
<b>Nova Scotia</b>	OEL STEL (ppm)	1000 ppm
<b>Nunavut</b>	OEL STEL (mg/m <sup>3</sup> )	2355 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL STEL (ppm)	1250 ppm
<b>Nunavut</b>	OEL TWA (mg/m <sup>3</sup> )	1884 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL TWA (ppm)	1000 ppm
<b>Northwest Territories</b>	OEL STEL (mg/m <sup>3</sup> )	2355 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL (ppm)	1250 ppm

# Safety Data Sheet (SDS)

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<b>Northwest Territories</b>	OEL TWA (mg/m <sup>3</sup> )	1884 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA (ppm)	1000 ppm
<b>Ontario</b>	OEL STEL (ppm)	1000 ppm
<b>Prince Edward Island</b>	OEL STEL (ppm)	1000 ppm
<b>Québec</b>	VEMP (mg/m <sup>3</sup> )	1880 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (ppm)	1000 ppm
<b>Saskatchewan</b>	OEL STEL (ppm)	1250 ppm
<b>Saskatchewan</b>	OEL TWA (ppm)	1000 ppm
<b>Yukon</b>	OEL STEL (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL (ppm)	1000 ppm
<b>Yukon</b>	OEL TWA (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA (ppm)	1000 ppm

## Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide sufficient ventilation to keep vapors below permissible exposure limit. Gas detectors should be used when flammable gases/vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Protective clothing. Gloves. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Not available

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical goggles or safety glasses.

**Skin and Body Protection:** Use chemically protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

**Other Information:** When using, do not eat, drink, or smoke.

Chemical-resistant gloves should be worn whenever this material is handled. The glove material has to be impermeable and resistant to the product. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. All glove recommendations presume that the risk of exposure is through splash and not intentional immersion of the hands into the product. Since glove permeation data does not exist for this material, no recommendation for the glove material can be given for the product. Permeation data must be obtained from the glove manufacturer to determine if the glove is suitable for the task.

# Safety Data Sheet (SDS)

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## Section 9: Physical and Chemical Properties

### Information on Basic Physical and Chemical Properties

<b>Physical state</b>	Liquid
<b>Appearance</b>	Colorless, clear, volatile liquid
<b>Odor</b>	Alcohol
<b>Odor Threshold</b>	: Not available
<b>pH</b>	: Not available
<b>Evaporation Rate</b>	: Not available
<b>Melting Point</b>	: Not available
<b>Freezing Point</b>	: -114°C (-173°F)
<b>Boiling Point</b>	: 78 °C (172.4 °F)
<b>Flash Point</b>	: 12.8 °C (55 °F) CC
<b>Auto-ignition Temperature</b>	: Not available
<b>Decomposition Temperature</b>	: Not available
<b>Flammability (solid, gas)</b>	: Not available
<b>Lower Flammable Limit</b>	: 3.3 % for Ethanol
<b>Upper Flammable Limit</b>	: 19 % for Ethanol
<b>Vapor Pressure</b>	: 44.6 mm Hg @ 20°C (68°F)
<b>Relative Vapor Density at 20 °C</b>	: 1.59 for Ethanol
<b>Relative Density</b>	: 0.8140-0.8157
<b>Specific Gravity</b>	: Not available
<b>Solubility</b>	: Water: Completely
<b>Partition Coefficient: N-Octanol/Water</b>	: Not available
<b>Viscosity</b>	: Not available
<b>Explosion Data – Sensitivity to Mechanical Impact</b>	: Not expected to present an explosion hazard due to mechanical impact.
<b>Explosion Data – Sensitivity to Static Discharge</b>	: Static discharge could act as an ignition source.

## Section 10: Stability and Reactivity:

<b>Reactivity:</b>	Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion.
<b>Chemical Stability:</b>	Stable at standard temperature and pressure.

# Safety Data Sheet (SDS)

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**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Open flame. Ignition sources.

**Incompatible Materials:** Strong oxidizing agents, acids, alkali metals, ammonia, hydrazine, peroxides, sodium, acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, perchloric acid, silver nitrate, mercuric nitrate, potassium-tert-butoxide, magnesium perchlorate, acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, potassium dioxide.

**Hazardous Decomposition Products:** Carbon oxides (CO, CO<sub>2</sub>).

## Section 11: Toxicological Information

### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

#### LD50 and LC50 Data:

<b>Ethyl Alcohol, 200 Proof (64-17-5)</b>	
<b>LC50 Inhalation Rat</b>	124.7 mg/l/4h
<b>Ethyl Alcohol, 200 Proof (64-17-5)</b>	
<b>OSHA Hazard Communication Carcinogen List</b>	In OSHA Hazard Communication Carcinogen list.

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Causes serious eye irritation.

**Respiratory or Skin**

**Sensitization:** Not classified

**Germ Cell**

**Mutagenicity:** Not classified

**Teratogenicity:** Not classified

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified



# Safety Data Sheet (SDS)

**Symptoms/Injuries After Inhalation:** Prolonged exposure to liquid may cause a mild irritation.

**Symptoms/Injuries After Skin Contact:** Repeated or prolonged skin contact may cause dermatitis and defatting.

**Symptoms/Injuries After Eye Contact:** Causes serious eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.

**Symptoms/Injuries After Ingestion:** Ingestion of this product is extremely harmful to human health. nausea and vomiting, higher exposure causes unconsciousness.

**Chronic Symptoms:** None expected under normal conditions of use.

[Information on](#)

[Toxicological Effects -](#)

[Ingredient\(s\) LD50 and](#)

[LC50 Data:](#)

Ethyl alcohol (64-17-5)	
LD50 Oral Rat	10470 mg/kg
LD50 Dermal Rat	20 ml/kg
LC50 Inhalation Rat	124.7 mg/l/4h
Ethyl alcohol (64-17-5)	
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

## Section 12: Ecological Information

### Toxicity

**Ecology - General:** Readily biodegrades. Evaporates to moderate extent. Does not bioaccumulate.

Ethyl alcohol (64-17-5)	
LC50 Fish 1	12.0 - 16.0 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	9268 - 14221 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

### Persistence and Degradability

Ethyl Alcohol (64-17-5)	
Persistence and Degradability	Not established. May cause long-term adverse effects in the environment.

### Bioaccumulative Potential

Ethyl Alcohol (64-17-5)	
Log Pow	-0.32
Bioaccumulative Potential	Not established.

**Mobility in Soil** Not available

# Safety Data Sheet (SDS)

## Other Adverse Effects

**Other Information:** Avoid release to the environment.

## Section 13: Disposal Considerations

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Additional Information:** Handle empty containers with care because residual vapors are flammable

## Section 14: Transportation Information

### In Accordance with DOT

**Proper Shipping Name** : ETHYL ALCOHOL SOLUTIONS  
**Hazard Class** : 3  
**Identification Number** : UN1170  
**Label Codes** : 3  
**Packing Group** : II  
**ERG Number** : 127

Note:

*Exemptions apply for small pack sizes.*



### In Accordance with IMDG

**Proper Shipping Name** : ETHYL ALCOHOL SOLUTIONS  
**Hazard Class** : 3  
**Identification number** : UN1170  
**Packing Group** : II  
**Label Codes** : 3  
**EmS-No. (Fire)** : F-E  
**EmS-No. (Spillage)** : S-D



### In Accordance with IATA

**Proper Shipping Name** : ETHYL ALCOHOL SOLUTIONS  
**Packing Group** : II **Identification Number** : UN1170 **Hazard Class:** 3  
**Label Codes** : 3  
**ERG Code (IATA)** : 3L



### In Accordance with TDG

**Proper Shipping Name** : ETHYL ALCOHOL SOLUTIONS  
**Packing Group** : II  
**Hazard Class** : 3  
**Identification Number** : UN1170



# Safety Data Sheet (SDS)

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**Label Codes** : 3

<b>Section 15: Regulatory Information</b>
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<b>Ethyl Alcohol, 200 Proof (64-17-5)</b>
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Listed on the United States TSCA (Toxic Substances Control Act) inventory
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<b>SARA Section 311/312 Hazard Classes</b>
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Fire hazard Immediate (acute) health hazard
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<b>Ethyl alcohol (64-17-5)</b>
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Listed on the United States TSCA (Toxic Substances Control Act) inventory
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<b>Water (7732-18-5)</b>
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Listed on the United States TSCA (Toxic Substances Control Act) inventory
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**US State Regulations:**

**State or local regulations**

- U.S. - Massachusetts - Right To Know List
- U.S. - New Jersey - Right to Know Hazardous Substance List
- U.S. - Pennsylvania - RTK (Right to Know) List

**Ethyl alcohol (64-17-5)**



- U.S. - Massachusetts - Right To Know List
- U.S. - New Jersey - Right to Know Hazardous Substance List
- U.S. - Pennsylvania - RTK (Right to Know) List

**Canadian Regulations**

<b>Ethyl Alcohol, 200 Proof (64-17-5)</b>
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# Safety Data Sheet (SDS)

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Listed on the Canadian DSL (Domestic Substances List) Listed on the Canadian	
YesIDL Concentration 0.1 %	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
 	
<b>Ethyl alcohol (64-17-5)</b>	
Listed on the Canadian DSLomestic (D Listed on the Canadian Substances	
IDL Concentration 0.1 %	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
<b>Water (7732-18-5)</b>	
Listed on the Canadian DSLomestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

# Safety Data Sheet (SDS)

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## Section 16: Other Information

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA

**GHS Full Text Phrases:**

Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation

Date of Issue: 01/20/2006

Date of Revision: 09/13/2022

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**End of Safety Data Sheet**