# Material Safety Data Sheet

Ethanol



# Section 1. Chemical product and company identification

Product name	: Ethanol
Supplier	: AIRGAS INC., on behalf of its subsidiaries 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
Synonym	: Ethyl alcohol; Alcohol; Alcohol anhydrous; Algrain; Anhydrol; Denatured ethanol; Ethyl hydrate; Ethyl hydroxide; Jaysol; Jaysol S; Methylcarbinol; SD Alchol 23-hydrogen; Tecsol; C2H5OH; Absolute ethanol; Cologne spirit; Fermentation alcohol; Grain alcohol; Molasses alcohol; Potato alcohol; Aethanol; Aethylalkohol; Alcohol, dehydrated; Alcohol, diluted; Alcool ethylique; Alcool etilico; Alkohol; Cologne spirits; Denatured alcohol CD-10; Denatured alcohol CD-5; Denatured alcohol CD-5a; Denatured alcohol SD-1; Denatured alcohol SD-13a; Denatured alcohol SD-17; Denatured alcohol SD-28; Denatured alcohol SD-30; Denatured alcohol SD-39b; Denatured alcohol SD-39c; Denatured alcohol SD-40m; Etanolo; Ethanol 200 proof; Ethyl alc; Etylowy alkohol; EtOH; NCI-C03134; Spirits of wine; Spirt; Thanol; Alkoholu etylowego; Ethanol, solution; Ethyl alcohol anhydrous; SD alcohol 23-hydrogen; UN 1170; Tecsol C; Alcare Hand Degermer; Absolute alcohol; Cologne spirits (alcohol); Denatured alcohol; Ethanol, silent spirit; Ethylol; Punctilious ethyl alcohol; Pyro; Spirit; Synasol; USI in oval; Ethanol standard
Material uses	: Other non-specified industry: MANUFACTURE OF ACETALDEHYDE AND OTHER CHEMICALS; SOLVENTS; ANTIFREEZE AND BRAKE FLUIDS; FUEL.
MSDS #	: 001114
Date of Preparation/Revision	: 4/28/2010.
In case of emergency	: 1-866-734-3438

## Section 2. Hazards identification

Physical state	:	Liquid. [CLEAR, COLORLESS LIQUID WITH A WEAK, ETHEREAL, VINOUS ODOR]
Emergency overview	1	WARNING!
		FLAMMABLE LIQUID AND VAPOR. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CAN CAUSE CANCER.
		Flammable liquid. Keep away from heat, sparks and flame. Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Avoid contact with skin and clothing. May cause target organ damage, based on animal data. Can cause cancer. Risk of cancer depends on duration and level of exposure. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.
Target organs	:	May cause damage to the following organs: blood, the reproductive system, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).
Potential acute health effect	<u>s</u>	
Eyes	:	Irritating to eyes.
Skin	:	Irritating to skin.
Inhalation	1	Irritating to respiratory system.
Ingestion	:	No known significant effects or critical hazards.
Potential chronic health effects	:	CARCINOGENIC EFFECTS: Classified 1 (Proven for humans.) by IARC. Classified A3 (Proven for animals.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.
Medical conditions aggravated by over- exposure	:	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

# Section 3. Composition, Information on Ingredients

#### **United States**

			<u>Exposure limits</u>
ethanol	64-17-5	100	ACGIH TLV (United States, 1/2009).
			STEL: 1000 ppm 15 minute(s).
			OSHA PEL 1989 (United States, 3/1989).
			TWA: 1000 ppm 8 hour(s).
			TWA: 1900 mg/m <sup>3</sup> 8 hour(s).
			NIOSH REL (United States, 6/2009).
			TWA: 1000 ppm 10 hour(s).
			TWA: 1900 mg/m <sup>3</sup> 10 hour(s).
			OSHA PEL (United States, 11/2006).
			TWA: 1000 ppm 8 hour(s).
			TWA: 1900 mg/m <sup>3</sup> 8 hour(s).

# Section 4. First aid measures

Eye contact	<ul> <li>Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.</li> </ul>
Skin contact	<ul> <li>In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.</li> </ul>
Inhalation	<ul> <li>Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.</li> </ul>
Ingestion	: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

# Section 5. Fire-fighting measures

Flammability of the product	: Flammable.
Auto-ignition temperature	: 398.85°C (749.9°F)
Flash point	: Closed cup: 12.85°C (55.1°F).
Flammable limits	: Lower: 3.3% Upper: 19%
Products of combustion	<ul> <li>Decomposition products may include the following materials: carbon dioxide carbon monoxide</li> </ul>
Extinguishing media	
Suitable	: Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
Not suitable	: Do not use water jet.
Special exposure hazards	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

#### Section 6. Accidental release measures

Personal precautions	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods for cleaning up	:	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

Handling

: Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

Recommended monitoring procedures	:	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
Engineering measures	:	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Derecanal protection		

Personal protection

Ethanol	
Eyes	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
Skin	<ul> <li>Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.</li> </ul>
Respiratory	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	<ul> <li>Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.</li> </ul>
Personal protection in case of a large spill	<ul> <li>Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.</li> </ul>
Product name United States	Exposure limits
ethanol	ACGIH TLV (United States, 1/2009). STEL: 1000 ppm 15 minute(s). OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m <sup>3</sup> 8 hour(s). NIOSH REL (United States, 6/2009). TWA: 1000 ppm 10 hour(s). TWA: 1900 mg/m <sup>3</sup> 10 hour(s). OSHA PEL (United States, 11/2006). TWA: 1000 ppm 8 hour(s). TWA: 1900 mg/m <sup>3</sup> 8 hour(s).

# Section 9. Physical and chemical properties

Physical state	: Liquid. [CLEAR, COLORLESS LIQUID WITH A WEAK, ETHEREAL, VINOUS ODOR]
Molecular weight	: 46.08 g/mole
Molecular formula	: C2-H6-O
<b>Boiling/condensation point</b>	: 78.4°C (173.1°F)
Melting/freezing point	: -113.9°C (-173°F)
Specific gravity	: 0.79 (Water = 1)
Vapor pressure	: 5.9 kPa (44 mm Hg) (at 20°C)
Vapor density	: 1.6 (Air = 1)
Evaporation rate	: 1.7 compared with butyl acetate
VOC	: 100 % (w/w)

# Section 10. Stability and reactivity

Stability and reactivity	: The product is stable.
Incompatibility with various substances	: Highly reactive or incompatible with the following materials: oxidizing materials and alkalis.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

# Section 11. Toxicological information

Toxicity data				
Product/ingredient name	Result	Species	Dose	Exposure

#### Ethanol

ethanol

LD50 Intra-arterial	Rat	11 mg/kg	-
LD50 Intraperitoneal	Rat	3600 ug/kg	-
LD50 Intravenous	Rat	1440 mg/kg	-
LD50 Oral	Rat	15010 mg/kg	-
LD50 Oral	Rat	7 g/kg	-
LD50 Oral	Rat	7060 mg/kg	-
LDLo Dermal	Rabbit	20000 mg/kg	-
LDLo Oral	Rat	7000 mg/kg	-
TDLo Intraperitoneal	Rat	3500 mg/kg	-
TDLo Intracerebral	Rat	106 ug/kg	-
TDLo Intraperitoneal		3000 mg/kg	-
TDLo Intraperitoneal		2700 mg/kg	-
TDLo Intraperitoneal		2500 mg/kg	-
TDLo Intraperitoneal		2000 mg/kg	-
TDLo Intraperitoneal		1.25 mg/kg	-
TDLo Intraperitoneal		1000 mg/kg	-
TDLo Intracerebral	Rat	363.6 ug/kg	-
TDLo Intraperitoneal		500 mg/kg	-
TDLo Intravenous	Rat - Male	0.5 g/kg	-
TDLo Oral	Rat - Male	5 mL/kg	-
TDLo Oral	Rat	4.44 mL/kg	-
TDLo Oral	Rat Dat Mala	4 mL/kg	-
TDLo Oral	Rat - Male Rat - Female	0.5 g/kg	-
TDLo Oral		10 mL/kg	-
TDLo Oral TDLo Oral	Rat - Female Rat	6000 mg/kg 12800 mg/kg	-
TDL0 Intraperitoneal		2.45 g/kg	-
TDL0 Intraperitoneal		1.5 g/kg	-
TDLo Oral	Rat - Male	5250 mg/kg	_
TDLo Oral	Rat	5000 mg/kg	_
TDLo Oral	Rat - Female	4800 mg/kg	_
TDLo Oral	Rat	4300 mg/kg	-
TDLo Oral	Rat	2 g/kg	-
TDLo Oral	Rat	5 g/kg	-
TDLo Intraperitoneal		1.2 g/kg	-
TDLo Oral	Rat	6 g/kg	-
TDLo Intraperitoneal		1 g/kg	-
TDLo Oral	Rat	5.25 g/kg	-
TDLo Oral	Rat - Male	1600 mg/kg	-
TDLo Oral	Rat	1500 mg/kg	-
TDLo Oral	Rat	8000 mg/kg	-
TDLo Oral	Rat	3 g/kg	-
TDLo Oral	Rat	0.4 g/kg	-
TDLo Oral	Rat	2.5 g/kg	-
TDLo Oral	Rat	6.4 g/kg	-
TDLo Oral	Rat	0.72 g/kg	-
TDLo Intraperitoneal		0.5 g/kg	-
TDLo Subcutaneous		7900 mg/kg	-
TDLo Intraperitoneal		2 g/kg	-
TDLo Intraperitoneal		0.25 g/kg	-
TDLo Unreported	Rat	3 g/kg	-
TDLo Intraperitoneal		2.4 mg/kg	-
LC50 Inhalation	Rat	124700 mg/m3	4 hours
Vapor	Det		C harma
LC50 Inhalation	Rat	5900 mg/m3	6 hours
Vapor	Dat	20000 0000	10 hours
LC50 Inhalation	Rat	20000 ppm	10 hours
Gas. : 3300 ppm			
	localified 1 (Drov	(on for humana ) by IA	

#### IDLH Chronic effects on humans

: CARCINOGENIC EFFECTS: Classified 1 (Proven for humans.) by IARC. Classified A3 (Proven for animals.) by ACGIH.

May cause damage to the following organs: blood, the reproductive system, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).

# Ethanol Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material to humans. Specific effects : Can cause cancer. Risk of cancer depends on duration and level of exposure. Mutagenic effects : No known significant effects or critical hazards. Reproduction toxicity : No known significant effects or critical hazards.

## Section 12. Ecological information

Aquatic	ecotoxicity
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ethanol

ecoloxicity				
l	-	Acute EC50 >100 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 2000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	-	Acute LC50 13 to 16 ml/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - 0.8 g	96 hours
	-	Acute LC50 6772000 to 7710000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 6386000 to 7461000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 6325000 to 7413000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 6076000 to 7115000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 5577000 to 6557000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 3715000 to 4432000 ug/L Fresh water	Daphnia - Water flea - Ceriodaphnia dubia - Neonate	48 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 0.2 to 0.5 g	96 hours
	-	Acute LC50 42000 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	4 days
	-	Acute LC50 25500 ug/L Marine water	Crustaceans - Brine shrimp - Artemia franchiscana -	48 hours

-	Acute LC50 13480000 ug/L Fresh water	LARVAE Fish - Fathead minnow - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) - 4 to 8 weeks - 1.1 to 3.1 cm	96 hours
-	Acute LC50 5680 to 7392 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <24 hours	48 hours
-	Acute LC50 10000000 to 11500000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 cm	96 hours
-	Acute LC50 11000000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 to 10 cm	96 hours
-	Acute LC50 14200000 to 15100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 30 days - 19.4 mm - 0.099 g	96 hours
-	Chronic NOEC <6.3 g/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

**Products of degradation** 

: Products of degradation: carbon oxides (CO, CO<sub>2</sub>) and water.

## Section 13. Disposal considerations

Waste disposal

: The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1170	ETHANOL OR ETHYL ALCOHOL OR ETHANOL SOLUTIONS OR ETHYL ALCOHOL SOLUTIONS	3	11	ANNUE COD	Limited quantity Yes. Packaging instruction Passenger aircraft Quantity limitation: 5 L Cargo aircra Quantity

Ethanol					 
					limitation: 60 L <u>Special</u> <u>provisions</u> 24, IB2, T4, TP1
TDG Classification	UN1170	ETHANOL MORE THAN 24 PER CENT ETHANOL, BY VOLUME; ETHANOL SOLUTION MORE THAN 24 PER CENT ETHANOL, BY VOLUME; ETHYL ALCOHOL MORE THAN 24 PER CENT ETHANOL, BY VOLUME; OR ETHYL ALCOHOL SOLUTION MORE THAN 24 PER CENT ETHANOL, BY VOLUME	3	II	Explosive Limit and Limited Quantity Index 5 Passenger Carrying Road or Rail Index 60
Mexico Classification	UN1170	ETHANOL OR ETHYL ALCOHOL OR ETHANOL SOLUTIONS OR ETHYL ALCOHOL SOLUTIONS	3	11	Limited quantity Yes. Packaging instruction Passenger aircraft Quantity limitation: 5 L Cargo aircraf Quantity limitation: 60 I Special provisions 24, IB2, T4, TP1

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

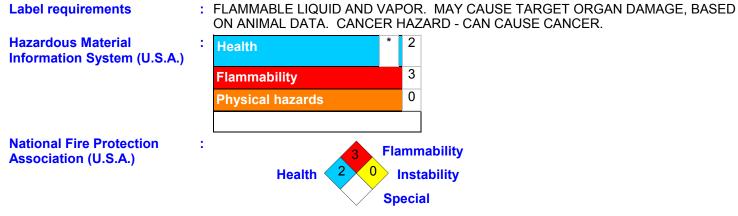
## Section 15. Regulatory information

#### United States HCS Classification

- : Flammable liquid
  - Carcinogen Target organ effects
- **U.S. Federal regulations**
- : United States inventory (TSCA 8b): This material is listed or exempted.

Ethanol	
	SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: ethanol SARA 311/312 MSDS distribution - chemical inventory - hazard identification: ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard
	Clean Water Act (CWA) 307: No products were found.
	Clean Water Act (CWA) 311: No products were found.
	Clean Air Act (CAA) 112 accidental release prevention: No products were found.
	Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
	Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
State regulations	<ul> <li>Connecticut Carcinogen Reporting: This material is not listed.</li> <li>Connecticut Hazardous Material Survey: This material is not listed.</li> <li>Florida substances: This material is not listed.</li> <li>Illinois Chemical Safety Act: This material is not listed.</li> <li>Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.</li> <li>Louisiana Reporting: This material is not listed.</li> <li>Louisiana Spill: This material is not listed.</li> <li>Massachusetts Spill: This material is not listed.</li> <li>Massachusetts Substances: This material is listed.</li> <li>Michigan Critical Material: This material is not listed.</li> <li>Mienesota Hazardous Substances: This material is not listed.</li> <li>New Jersey Hazardous Substances: This material is listed.</li> <li>New Jersey Spill: This material is not listed.</li> <li>New Jersey Toxic Catastrophe Prevention Act: This material is not listed.</li> <li>New York Acutely Hazardous Substances: This material is not listed.</li> <li>New York Toxic Chemical Release Reporting: This material is not listed.</li> <li>Pennsylvania RTK Hazardous Substances: This material is not listed.</li> <li>Rhode Island Hazardous Substances: This material is not listed.</li> </ul>
<u>Canada</u>	
WHMIS (Canada)	<ul> <li>Class B-2: Flammable liquid Class D-2B: Material causing other toxic effects (Toxic).</li> <li>CEPA Toxic substances: This material is not listed.</li> <li>Canadian ARET: This material is not listed.</li> <li>Canadian NPRI: This material is listed.</li> <li>Alberta Designated Substances: This material is not listed.</li> <li>Ontario Designated Substances: This material is not listed.</li> <li>Quebec Designated Substances: This material is not listed.</li> </ul>

## Section 16. Other information



#### Ethanol

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.