

# SAFETY DATA SHEET

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## SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

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**CAS Number:** 67-63-0  
**Product Name:** Isopropyl Alcohol 99%  
**Revision Date:** Jun 20, 2018 **Date Printed:** Jun 20, 2018  
**Version:** 1.0 **Supersedes Date:** N.A.  
**Manufacturer's Name:** Thames River Chemical Corp.  
**Address:** 5230 Harvester Road Burlington, ON, CA, L7L 4X4  
**Emergency Phone:** CHEMTREC (800) 424-9300  
**Information Phone Number:** 905-681-5353  
**Fax:** 905-681-5377  
**Product/Recommended Uses:** For laboratory or industrial use only.

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## SECTION 2) HAZARDS IDENTIFICATION

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### Classification

Eye Irritation - Category 2A

Flammable Liquids - Category 2

Specific Target Organ Toxicity -Single Exposure (Narcotic Effects) - Category 3

### Pictograms



### Signal Word

Danger

### Hazard Statements - Health

Causes serious eye irritation

May cause drowsiness or dizziness

### Hazard Statements - Physical

Highly flammable liquid and vapor

### Precautionary Statements - General

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

Keep out of reach of children.

Read label before use.

### Precautionary Statements - Prevention

Wash/Wash hands thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.  
Use explosion-proof electrical, ventilating, lighting equipment.  
Use only non-sparking tools.  
Take action to prevent static discharges.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.

#### Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
In case of fire: Use carbon dioxide, alcohol foam, water spray or dry chemical to extinguish.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor, if you feel unwell.

#### Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.  
Store in a well-ventilated place. Store locked up.

#### Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

#### Physical Hazards Not Otherwise Classified

No Data Available

#### Health Hazards Not Otherwise Classified

No Data Available

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### SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

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CAS	Chemical Name	% By Weight
0000067-63-0	ISOPROPYL ALCOHOL	95.0% - 100.0%
0000071-23-8	PROPYL ALCOHOL	0.1% - 1.0%
0000071-36-3	N-BUTYL ALCOHOL	0.1% - 1.0%
0000064-17-5	ETHYL ALCOHOL	0.1% - 1.0%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

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### SECTION 4) FIRST-AID MEASURES

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#### Inhalation

Get medical advice/attention if you feel unwell or are concerned. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Remove source of exposure or move person to fresh air and keep comfortable for breathing. Eliminate all ignition sources if safe to do so. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.

#### Eye Contact

If eye irritation persists: Get medical advice/attention. If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 15 minutes, while holding the eyelids open.

#### Skin Contact

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Store contaminated clothing under water and wash before re-use or discard. Rinse skin with water/shower and mild soap for 5 minutes or until product is removed. Get medical attention if symptoms occur.

#### Ingestion

If swallowed, DO NOT induce vomiting. Get medical advice/attention.

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

No Data Available

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

No Data Available

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**SECTION 5) FIRE-FIGHTING MEASURES**

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**Suitable Extinguishing Media**

Water spray, Dry chemical, Carbon dioxide (CO<sub>2</sub>), Alcohol-resistant foam.

**Unsuitable Extinguishing Media**

Do not use straight stream of water.

**Specific Hazards in Case of Fire**

Containers may explode in fire. Fire will produce irritating gases. Highly flammable liquid and vapour. Material contains a flammable solvent that may accumulate in the container headspace. Vapours may form explosive mixtures with air. Prevent buildup of vapours or gases to explosive concentrations. Forms explosive peroxides which may be shock sensitive.

**Fire-fighting Procedures**

Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely. Stop spill/release if it can be done safely. Cool containers with flooding quantities of water until well after fire is out. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

**Special Protective Actions**

Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

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**SECTION 6) ACCIDENTAL RELEASE MEASURES**

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**Emergency Procedure**

Isolate hazard area and keep unauthorized personnel away. Stay uphill and/or upstream. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Evacuate and isolate hazard area and keep unauthorized personnel away. A vapor-suppressing foam may be used to reduce vapors.

**Recommended Equipment**

Wear chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA).

**Personal Precautions**

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing.

**Environmental Precautions**

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Stop spill/release if it can be done safely. Dike far ahead of liquid spill for later disposal.

**Methods and Materials for Containment and Cleaning up**

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean, non-sparking tools to collect absorbed material. Ventilate area after clean-up is complete.

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**SECTION 7) HANDLING AND STORAGE**

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**General**

Wash hands after use. Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. This product is not intended for human or animal consumption. All containers must be properly labelled.

Prevention of Fire and Explosion: Keep away from heat and sources of ignition. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use only non-sparking tools. Keep container tightly closed. Use only with adequate ventilation. Keep from contact with oxidizing materials. If peroxide formation is suspected, do not open or move container. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not distill or allow to evaporate to near dryness. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

### Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. Report ventilation failures immediately. The use of local ventilation is recommended to control emissions near the source.

### Storage Room Requirements

Store in dry, cool areas, out of direct sunlight and away from other sources of heat. Empty container retain residue and may be dangerous. Keep away from incompatible materials (e.g. oxidizers). Keep containers securely sealed when not in use. Bond and ground metal containers/cylinders when transferring. Avoid storing in direct sunlight or near other heat sources; eliminate all sources of ignition. Protect containers against banging or other physical damage when storing, transferring, or using them. Keep in a dry, cool and well-ventilated place. Cool conditions (5 - 300C). Keep container tightly closed. Keep away from food, drink and animal feeding stuffs.

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## SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Eye protection

Wear indirect-vent, impact and splash resistant goggles when working with liquids

### Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber.

### Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

### Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	CANsmg	CANspm	CANtmg	CANtppm	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	OSHA Skin designation	ACGIH STEL (mg/m3)
ETHYL ALCOHOL	2355	1250	1884	1000			1900	1000		1		
ISOPROPYL ALCOHOL	1228	500	983	400			980	400		1		
N-BUTYL ALCOHOL							300	100		1		
PROPYL ALCOHOL	615	250	491	200			500	200		1		

Chemical Name	ACGIH STEL (ppm)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH TLV Basis	ACGIH Carcinogen	ACGIH Notations
ETHYL ALCOHOL	1000			URT irr	A3	A3
ISOPROPYL ALCOHOL	400		200	Eye & URT irr; CNS impair	A4	A4;BEI
N-BUTYL ALCOHOL			20	Eye & URT irr		
PROPYL ALCOHOL			100	Eye & URT irr	A4	A4

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## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

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### Physical and Chemical Properties

Density	6.55 lb/gal
Specific Gravity	0.79
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Appearance	clear colourless liquid
Odor Description	characteristic
Odor Threshold	~40 ppm/no unit specified
pH	none
Melting/Freezing Point	-88.5 °C
Low Boiling Point	82 °C
High Boiling Point	N/A
Flash Point	12 °C
Vapor Pressure	33 mmHg
Vapor Density	2.07 (air=1)
Evaporation Rate	1.5
Upper Explosion Level	13%
Lower Explosion Level	2%
Water Solubility	soluble
Coefficient Water/Oil	Log P(oct) = 0.05
Viscosity	2.4 centipoise

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## SECTION 10) STABILITY AND REACTIVITY

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### Reactivity

No Data Available

### Stability

Stable under normal storage and handling conditions.

### Conditions to Avoid

Heat, flames, sparks, and other sources of ignition.

### Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

### Incompatible Materials

Strong oxidizing agents.

### Hazardous Decomposition Products

Hazardous Combustion Products: Carbon oxides

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## SECTION 11) TOXICOLOGICAL INFORMATION

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**Likely Route of Exposure**

Inhalation, ingestion, skin absorption

**Acute Toxicity**

No Data Available

**Aspiration Hazard**

No Data Available

**Carcinogenicity**

No Data Available

**Germ Cell Mutagenicity**

No Data Available

**Reproductive Toxicity**

No Data Available

**Respiratory/Skin Sensitization**

No Data Available

**Serious Eye Damage/Irritation**

Causes serious eye irritation

**Skin Corrosion/Irritation**

No Data Available

**Specific Target Organ Toxicity - Repeated Exposure**

No Data Available

**Specific Target Organ Toxicity - Single Exposure**

May cause drowsiness or dizziness

**Potential Health Effects - Miscellaneous**

0000064-17-5 ETHYL ALCOHOL

The following medical conditions may be aggravated by exposure: liver disease. Tests in some laboratory animals indicate this compound may have embryotoxic activity. Tests in animals demonstrate reproductive toxicity. Ingestion may cause any of the following: stupor (central nervous system depression), gastrointestinal irritation. If absorbed through the skin, may be: harmful.

0000067-63-0 ISOPROPYL ALCOHOL

The following medical conditions may be aggravated by exposure: dermatitis, respiratory disease. Developmental toxicity was seen in rat's offspring at doses that were maternally toxic. Contact will cause moderate to severe redness and swelling, itching, tingling sensation, painful burning. May cause injury to the cornea of the eyes. Prolonged or repeated exposure may cause damage to any of the following organs/systems: liver. Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights.

0000071-36-3 N-BUTYL ALCOHOL

May cause abnormal blood forming function with anemia. Liquid splashes in the eye may result in chemical burns.

0000064-17-5 ETHYL ALCOHOL

LC50 (mouse): Approximately 21000 ppm (4-hour exposure); cited as 39 g/m<sup>3</sup> (4-hour exposure) (1, unconfirmed)

LD50 (oral, rat): 7060 mg/kg (41); 10600 mg/kg (41); 13660 mg/kg (37)

LD50 (oral, mouse): 3450 mg/kg (1, unconfirmed)

LD50 (oral, guinea pig): 5560 mg/kg (37)

0000067-63-0 ISOPROPYL ALCOHOL

LC50 (rat): 17000 ppm (4-hour exposure); cited as 12000 ppm (8-hour exposure) (18)

LD50 (oral, male rat): 4710 mg/kg (cited as 6.0 mL/kg) (19)

LD50 (oral, mouse): 3600 mg/kg (20, unconfirmed)

LD50 (dermal, rabbit): 12870 mg/kg (cited as 16.4 mL/kg) (14)

0000071-23-8 PROPYL ALCOHOL

LC50 (rat): approximately 4000 ppm (4-hour exposure); 2/6 animals died (1)

LD50 (oral, rat): 1870 mg/kg (1)

LD50 (oral, young female rat): 660 mg/kg (3)

LD50 (oral, young male rat): 560 mg/kg (3)

LD50 (oral, rabbit): 2820 mg/kg (2)

LD50 (dermal, rabbit): 4000 mg/kg (cited as 5.04 mL/kg) (1)

0000071-36-3 N-BUTYL ALCOHOL

LC50 (rat): greater than 8000 ppm (4-hour exposure) (14)

LD50 (oral, rat): 2510 mg/kg (15)

LD50 (oral, male rat): 790 mg/kg (16)\*

LD50 (oral, female rat): 2020 mg/kg (16)\* \*(Note: the rats used in this study appear to have been very young (60-100 grams).)

LD50 (oral, hamster): 1200 mg/kg (11, original)

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## SECTION 12) ECOLOGICAL INFORMATION

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### Toxicity

Toxicity to fish (LC50): > 100 mg/l estimated

Toxicity to daphnia (EC50): > 100 mg/l estimated

### Mobility in Soil

No Data Available

### Bio-accumulative Potential

No Data Available

### Persistence and Degradability

Readily biodegradable

### Other Adverse Effects

No Data Available

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## SECTION 13) DISPOSAL CONSIDERATIONS

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### Waste Disposal

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, provincial and local laws.

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## SECTION 14) TRANSPORT INFORMATION

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### U.S. DOT Information

UN number: UN1219

Proper shipping name: Isopropanol or Isopropyl alcohol

Hazard class: 3

Packaging group: II

Hazardous substance (RQ): No Data Available

Toxic-Inhalation Hazard: No Data Available

Marine Pollutant: No Data Available

Note / Special Provision: No Data Available

### Transport Canada Information

UN number: UN1219

Proper shipping name: Isopropanol or Isopropyl alcohol

Hazard class: 3

Packaging group: II

Marine Pollutant: No Data Available

Transport in bulk (according to Annex II of MARPOL 73/78): No Data Available

Note / Special Provision: Note / Special Provision

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## SECTION 15) REGULATORY INFORMATION

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CAS	Chemical Name	% By Weight	Regulation List
0000067-63-0	ISOPROPYL ALCOHOL	95.0% - 100.0%	DSL,TSCA,EU_EC_Inventory - EC Inventory
0000071-23-8	PROPYL ALCOHOL	0.1% - 1.0%	DSL,TSCA,EU_EC_Inventory - EC Inventory
0000071-36-3	N-BUTYL ALCOHOL	0.1% - 1.0%	DSL,TSCA,EU_EC_Inventory - EC Inventory
0000064-17-5	ETHYL ALCOHOL	0.1% - 1.0%	DSL,TSCA,EU_EC_Inventory - EC Inventory

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## SECTION 16) OTHER INFORMATION

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### Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CANsmg or CANspmm - Canadian Short Term Exposure Level in mg/L or in ppm; CANtmg or CANtppm - Canadian Time Weighted Average in mg/L or in ppm; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

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