

Section 01 - Product And Company Identification

Product Identifier	Isopropyl Alcohol 99%
Other Means of Identification	Isopropanol, 2-propanol, dimethylcarbinol, 2-hydroxypropane, IPA, isopropyl alcohol, propan-2-ol, sec-propyl alcohol, 2-propyl alcohol.
Product Use and Restrictions on Use	Cleaning
Initial Supplier Identifier	Commercial Alcohols, 2 Chelsea Lane, Brampton, Ontario, L6T 3Y4
Prepared By	Clearsolv Solvents Inc., 472B Adams Road, Kelowna, BC, V1X 7S1 Phone: 1 (778) 753-7466 1 (306) 664 – 2522
24-Hour Emergency Phone	

Section 02 - Hazard Identification

GHS-Classification

Serious Eye Damage/Irritation	Category 2
STOT-Single Exposure	Category 3

Physical Hazards

Flammable Liquid	Category 2
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Warning

Hazards Statements

H319 – Causes serious eye damage.
H336 – May cause drowsiness or dizziness.
H225 – Highly flammable liquid and vapour.

Pictograms



Precautionary Statements

P210 – Keep away from heat, sparks, open flames, and hot surfaces. — No smoking.
P233 – Keep container tightly closed.
P403 + P235 – Store in a well-ventilated place. Keep cool.
P405 – Store locked up.
P271 – Use only outdoors or in a well-ventilated area.

P240 – Ground/bond container and receiving equipment.
 P241 – Use explosion-proof electrical, ventilating, lighting, and equipment.
 P242 – Use only non-sparking tools.
 P243 – Take precautionary measures against static discharge.
 P370 + P378 – In case of fire: Use carbon dioxide, dry chemical powder, appropriate foam, water spray or fog for extinction.
 P261 – Avoid breathing mist, vapours or spray.
 P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
 P280 – Wear protection and face protection.
 P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 – If eye irritation persists: Get medical advice/attention.
 P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Isopropanol	67-63-0	≥ 90%	
Water	7732-18-5	Balance	

Section 04 - First Aid Measures

Inhalation	Remove source of contamination or move victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention.
Skin Contact / Absorption	Remove contaminated clothing. Rinse skin with lukewarm, gently flowing water for 5 minutes. If irritation persists, repeat flushing and seek medical attention. Completely decontaminate clothing, shoes and leather goods before re-use or discard.
Eye Contact	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 30 minutes, while forcibly holding the eyelids open to ensure complete irrigation of the eye tissue. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens until flushing is done. Seek immediate medical attention.
Ingestion	NEVER give anything by mouth if victim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Seek medical attention.
Additional Information	Not Available

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media	Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Water may be effective for cooling, but may not be effective for extinguishing a fire because it may not cool 2-propanol below its flash point. Firefighting foams, such as multipurpose alcohol-resistant foam, are recommended for most flammable liquid fires.
Unsuitable Extinguishing Media	Not Available
Specific Hazards Arising From the Chemical	During a fire, irritating/toxic gases, such as carbon monoxide and carbon dioxide, and other toxic and irritating gases, smoke and fumes may be generated. The vapour can accumulate in confined spaces, resulting in a toxicity and flammability hazard. Closed containers may rupture violently and suddenly release large amount of product when exposed to fire or excessive heat for a sufficient period of time.

Special Protective Equipment and Precautions for Fire-Fighters Wear NIOSH-approved self-contained breathing apparatus and protective gear.

Further Information Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue.

Environmental Precautions Prevent material from entering waterways, sewers or confined spaces.

Methods and Materials for Containment and Cleaning Up SMALL SPILLS: Soak up spill with absorbent material which does not react with spilled chemical. Put material in suitable, covered, labelled containers. Flush area with water. LARGE SPILLS: Contact fire and emergency services and supplier for advice. Contain spill with earth, sand, or absorbent material which does not react with spilled material. Remove liquid by explosion-proof pumps or vacuum equipment. Place in a suitable, covered, labelled containers. Contaminated absorbent material may pose the same hazards as the spilled product.

Section 07 - Handling and Storage

Precautions for Safe Handling This material is a FLAMMABLE liquid and an EYE IRRITANT. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.

Conditions for Safe Storage Store in a cool, well-ventilated area, out of direct sunlight and away from heat and ignition sources. Keep storage area clear of burnable materials. Lighted cigarettes, matches, or any other ignition sources should not be allowed around indoor or outdoor storage areas.

Incompatibilities Strong oxidizing agents, strong acids, alkali metals, aluminum, crotonaldehyde, phosgene, potassium t-butoxide, trinitromethane.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Isopropanol	ACGIH	TLV-TWA	200ppm
	ACGIH	TLV-STEL	400ppm
	OSHA	PEL-TWA	400ppm
	OSHA	PEL-STEL	500ppm

Engineering Control(s)

Ventilation Requirements Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face Chemical splash goggles and a face shield should be worn while product is being handled. Contact lenses should not be worn as they may contribute to severe eye injury.

Hand Protection	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Skin and Body Protection	RECOMMENDED (resistance to breakthrough longer than 8 hours): Butyl rubber, neoprene rubber, nitrile rubber, Viton(R), Viton butyl rubber, Barrier (PE/PA/PE), Silver Shield/4H(R) (polyethylene/ethylene vinyl alcohol), Tychem(R) CPF3, Tychem F(R), Tychem(R) Responder (R). CAUTION, use for short periods only (resistance to breakthrough less than 1 hour): Polyvinyl chloride.
Respiratory Protection	NIOSH/OSHA RECOMMENDATIONS FOR ISOPROPYL ALCOHOL CONCENTRATIONS IN AIR: UP TO 2000ppm: SAR operated in a continuous-flow mode; or a full-face piece chemical cartridge respirator with organic vapour cartridge(s); or gas mask with organic vapour canister; or powered air-purifying respirator with organic vapour cartridge(s); or full-face piece SCBA; or full-face piece SAR. EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-face piece SCBA; or positive pressure, full-face piece SAR with an auxiliary positive pressure SCBA. ESCAPE: Gas mask with organic vapour canister; or escape-type SCBA.
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Liquid
Colour	Colourless
Odour	Sharp, musty odour of rubbing alcohol
Odour Threshold	3.3-610ppm (detection); 7.6-49ppm (recognition)

Property

pH	Not Available
Melting Point/Freezing Point	-88.5°C (-127°F)
Initial Boiling Point and Boiling Range	82.3°C (180°F)
Flash Point	18°C (65°C)
Evaporation Rate	1.5 (butyl acetate=1); 11.0 (diethyl ether=1)
Flammability	Flammable liquid
Upper Flammable Limit	12%
Lower Flammable Limit	2%
Vapour Pressure (mm Hg, 20°C)	33.1
Vapour Density (Air=1)	2.07

Relative Density	Not Available
Solubility(ies)	Completely soluble in water. Soluble in most organic solvents, such as ethanol, acetone, diethyl ether and chloroform; soluble in benzene.
Partition Coefficient: n-octanol/water	Log P _{ow} = 0.05
Auto-ignition Temperature	399°C
Decomposition Temperature	Not Available
Viscosity	2.4mPa·s @ 20°C
Explosive Properties	Can readily form explosive mixtures with air, at or above 12°C.
Specific Gravity (Water=1)	0.79
% Volatiles by Volume	Not Available
Formula	C ₃ H ₈ O
Molecular Weight	60.09

Section 10 - Stability and Reactivity

Reactivity	Not Available
Stability	Normally stable. However, 2-propanol may form peroxides when the anhydrous (no water) material is stored for long periods in contact with air and light. The peroxides are not hazardous unless concentrated by distillation.
Possibility of Hazardous Reactions	Polymerization does not occur.
Conditions to Avoid	Open flames, sparks, electrostatic discharge, heat and other ignition sources, light prolonged storage.
Incompatible Materials	Strong oxidizing agents, strong acids, alkali metals, aluminum, crotonaldehyde, phosgene, potassium t-butoxide, trinitromethane.
Hazardous Decomposition Products	Unstable peroxides.

Section 11 - Toxicological Information

Acute Toxicity

Component	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Isopropanol	3.6 g/kg (mouse)	12.8 g/kg (rabbit)	17,000 ppm (rat, 4hr)

Chronic Toxicity – Carcinogenicity

Component	IARC
Isopropanol	Not considered carcinogenic.

Skin Corrosion/Irritation Non-irritant to very mild irritant.

Ingestion Not considered toxic if ingested. No adverse effects are expected.

Inhalation	No reports of harmful effects developing following occupational exposure. Greater concentrations may cause central nervous system depression.
Serious Eye Damage/Irritation	Moderate to severe eye irritant.
Respiratory or Skin Sensitization	Not considered a skin or respiratory sensitizer.
Germ Cell Mutagenicity	Not considered to be mutagenic.
Reproductive Toxicity	Not considered to be a reproductive toxin.
STOT-Single Exposure	May cause drowsiness or dizziness upon
STOT-Repeated Exposure	Inhalation of high concentrations may cause central nervous system depression with symptoms of headache, nausea, dizziness, vomiting and incoordination.
Aspiration Hazard	Not Available
Synergistic Materials	2-Propanol has enhanced the toxicity of carbon tetrachloride, 1,1,2-trichloroethane, chloroform, trichloroethylene, and dimethylnitrosamine in rodents.

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Isopropanol	EC ₅₀ (Green algae order, 24hr): 1000mg/L	LC ₅₀ (Pimephales promelas, 96hr): 6120mg/L	LC ₅₀ (Daphnia magna, 24hr): 10000mg/L
Biodegradability	Product is biodegradable.		
Bioaccumulation	Product is not expected to bioaccumulate.		
Mobility	Expected to have very high mobility.		
Other Adverse Effects	Isopropanol presents a low potential hazard to aquatic or terrestrial biota.		

Section 13 – Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number	UN1219
UN Proper Shipping Name	ISOPROPANOL
Transport Hazard Class(es)	3
Packaging Group	II
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special Precautions	Not Available
Transport in Bulk	Not Available
<u>TDG</u>	
Other	Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods

Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 – Other Information

Preparation Date March 1, 2016

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

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If you have any questions or concerns please call our customer service center.

References:

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA
- 7) PAN

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