

## Section 01 - Product And Company Identification

<b>Product Identifier</b>	Isopropyl Alcohol
<b>Other Means of Identification</b>	Isopropanol, 2-propanol, dimethylcarbinol, 2-hydroxypropane, IPA, isopropyl alcohol, propan-2-ol, sec-propyl alcohol, 2-propyl alcohol.
<b>Product Use and Restrictions on Use</b>	Cleaning ; Industrial Manufacturing Process
<b>Supplied By</b>	Clearsolv Solvents Inc./ClearSolv Solvents USA, 306-890 Clement Ave, Kelowna, BC, V1Y 0H8 Phone: (877) 904-0166 www.clearsolv.com
<b>24-Hour Emergency Phone</b>	24 Hour Emergency Number (CHEMTREC) <b>North America:</b> 800-424-9300

## Section 02 - Hazard Identification

### GHS-Classification

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

### Physical Hazards

<b>Flammable Liquid</b>	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.

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## Section 03 - Composition / Information on Ingredients

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Chemical Name	CAS Number	Concentration %	Unique Identifiers
Isopropanol	67-63-0	68-100%	
Water	7732-18-5	Balance	

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## Section 04 - First Aid Measures

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<b>Inhalation</b>	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.
<b>Skin Contact / Absorption</b>	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.
<b>Eye Contact</b>	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.
<b>Ingestion</b>	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.
<b>Additional Information</b>	Not Available

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## Section 05 - Fire Fighting Measures

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<b>Suitable Extinguishing Media</b>	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.
<b>Unsuitable Extinguishing Media</b>	Not Available
<b>Specific Hazards Arising From the Chemical</b>	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.



<b>Hand Protection</b>	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
<b>Skin and Body Protection</b>	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.
<b>Respiratory Protection</b>	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.
<b>Thermal Hazards</b>	Not Available

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## **Section 09 - Physical and Chemical Properties**

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### **Appearance**

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

### **Property**

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

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

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## Section 10 - Stability and Reactivity

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<b>Reactivity</b>	Not Available
<b>Stability</b>	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.
<b>Possibility of Hazardous Reactions</b>	Polymerization does not occur.
<b>Conditions to Avoid</b>	Open flames, sparks, electrostatic discharge, heat and other ignition sources, light prolonged storage.
<b>Incompatible Materials</b>	Strong oxidizing agents, strong acids, alkali metals, aluminum, crotonaldehyde, phosgene, potassium t-butoxide, trinitromethane.
<b>Hazardous Decomposition Products</b>	Unstable peroxides.

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## Section 11 - Toxicological Information

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### Acute Toxicity

Component	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
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.

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

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## Section 12 – Ecological Information

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### Ecotoxicity

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

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## Section 13 – Disposal Considerations

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

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## Section 14 – Transport Information

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<b>UN Number</b>	UN1219
<b>UN Proper Shipping Name</b>	ISOPROPANOL
<b>Transport Hazard Class(es)</b>	3
<b>Packaging Group</b>	II
<b>Environmental Hazards</b>	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
<b>Special Precautions</b>	Not Available
<b>Transport in Bulk</b>	Not Available
<b><u>TDG</u></b>	
<b>Other</b>	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.

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## **Section 15 – Regulatory Information**

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**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.**

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## **Section 16 – Other Information**

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**Rev. Date**

06/Jun/2021

**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.

### **Clearsolv Solvents Inc.**

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