

Material Safety Data Sheet  
 May be used to comply with OSHA's  
 Hazard Communication Standard.  
 29 CFR 1910, 1200, Standard must be  
 consulted for specific requirements.

U.S. Department of Labor  
 Occupational Safety and Health Administration  
 (Non-mandatory Form)  
 Form Approved  
 OMB No. 1218-0072

**Isopropanol Alcohol**

**Section 1 - Composition**

Components	CAS
<b>Isopropanol</b>	<b>67-63-0</b>

**Section 2 – Hazard Identification**

Colorless, volatile liquid with the odor of rubbing alcohol. Isopropyl alcohol is a dangerous fire risk. Prolonged exposure to elevated concentrations of vapors may result in irritation of the eyes, nose, and throat and central nervous system (CNS) depression. Prolonged dermal exposure can result in dry, cracking skin.	
Potential Routes of Exposure	Ingestion, inhalation, dermal contact, eye contact
Target Organs	Eyes, skin, respiratory system
<b>Symptoms of Overexposure</b>	
Inhalation	Mild irritation of eyes, nose and throat
Ingestion	Drowsiness, headache
Dermal Contact	Dry, cracking skin
Acute Effects	Irritation of skin and/or upper respiratory TRACT AS NOTED ABOVE. Acute CNS depression may be manifested as giddiness, headache, dizziness and/or nausea.
Chronic Effects	Chronic exposure can result in skin irritation and contact dermatitis.
<b>Pre-existing disorders of the skin, eyes, and respiratory tract may be exacerbated by exposure to isopropyl alcohol.</b>	

**Section 3 – First Aid Measure**

Eye	Flush eyes with copious amount of water for at least 15 minutes.
Skin	Flush with water. If irritation persists, seek medical attention.
Ingestion	Do not induce vomiting if victim is unconscious or drowsy. Seek medical attention or contact the poison control center.
Inhalation	Remove victim to fresh air and provided oxygen if breathing is difficult. Seek medical attention if breathing continues to be difficult.

**Section 4 – Fire Fighting Measures**

Extinguishing Media	Use water fog, alcohol foam, dry chemical or CO2.
Unusual Fire or Explosion Hazards	Containers exposed to intense heat from fires should be cooled with large amounts of water to prevent buildup of internal pressure due to vapor generation which could result in container rupture.
Recommendations	Clear area of unprotected personnel. Wear complete turnout gear. Cool containers exposed to fire with water.

**Section 5 – Accidental Release Measures**

Large Spills	Eliminate all ignition sources. Equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Contain source of spill. Dike or otherwise confine spilled product. Uncontrolled releases to air, land, or water may be reportable to the National Response Center (1-800-424-8802).
Small Spills	Take up with absorbent material and place in non-leaking container; seal tightly. Dispose of absorbent (see section 12).

**Section 6 – Handling and Storage**

Storage Requirements	Store in tightly closed containers in a cool, dry area away from heat and other possible ignition sources.
Handling Precautions	Use non-sparking tools to open containers. Maintain appropriate class of fire extinguishers nearby in case of fire.

### Section 7 – Exposure Controls/Personal Protection

OSHA PEL	<b>400ppm</b>	OSHA STEL	<b>500ppm</b>	IDLH	<b>12,000ppm</b>
Recommended Engineering Controls	<b>Use explosion-proof ventilation equipment as necessary to maintain airborne concentrations below the PEL. Ground all containers to prevent static sparks during fluid transfer.</b>				
Recommended Admin Controls	<b>Train employees on the hazards of Isopropyl Alcohol.</b>				
Personal Protection Equipment	<b>Goggles, gloves, NIOSH approved respiratory protection.</b>				
Recommended Hygiene Practices	<b>Clean personal protection equipment and work clothing contaminated prior to reuse. After working with the product, be sure to wash before eating, smoking, drinking, or applying cosmetics.</b>				

### Section 8 – Physical and Chemical Properties

Appearance	<b>Colorless Liquid</b>	Odor	<b>Mild rubbing alcohol</b>	UEL	<b>12%</b>	LEL	<b>2%</b>
Odor Threshold	<b>43ppm</b>	Water Solubility	<b>Miscible</b>				

	<b>50% IPA</b>	<b>70% IPA</b>	<b>91% IPA</b>	<b>99% IPA</b>
Vapor Pressure @ 68°F (approx.)	<b>29mm</b>	<b>23mm</b>	<b>33mm</b>	<b>33mm</b>
Specific Gravity	<b>.929</b>	<b>.878</b>	<b>.790</b>	<b>.790</b>
Boiling Point	<b>176°F</b>	<b>.878</b>	<b>180°F</b>	<b>181°F</b>
Flash Point (TAG Open Cup)	<b>74.5°F</b>	<b>70.5°F</b>	<b>54°F</b>	<b>53°F</b>
Freezing Point	<b>-32°- -50°C</b>	<b>-32°- -50°C</b>	<b>-32°- -50°C</b>	<b>-127°F</b>
Molecular Weight	<b>47.5</b>	<b>47.5</b>	<b>47.5</b>	<b>60.1</b>
Auto Ignition Temperature	<b>No Data</b>	<b>No Data</b>	<b>No Data</b>	<b>750°F</b>

### Section 9 – Stability and Reactivity

Stability	<b>Stable</b>	Polymerization	<b>Will not occur</b>
Incompatible Chemicals	<b>Strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, isocyanates</b>		
Conditions to avoid	<b>Heat, sparks, and open flame. Do not store in aluminum &gt; 120°F</b>		
Hazardous Products	<b>CO and unidentified organic compounds may be formed.</b>		

### Section 10 – Toxicological Information

LD50	5,840 mg/kg (acute oral – rat); 13,000 mg/kg (acute dermal- rabbit)
LC50	16,000 ppm/8 hr (inhalation- rat)
Carcinogenicity	Not identified as a carcinogen by OSHO, IARC, or NTP
Matagenicity	Not indicated
Reproductive Effects	Not indicated

### Section 11 – Ecological Information

Exotoxicity	N/A
Environmental Fate	N/A
Soil Absorption/Mobility	Highly mobile
Environmental Degradation	Should be removed readily from soils and water by volatilization and biodegradation.

### Section 12 – Disposal Considerations

Disposal	Contact your supplier or a licensed contractor for detailed recommendations.
Disposal Regulatory Requirements	Follow applicable Federal, state, and local regulations. Consider fuels blending as an alternative to incineration.

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### Section 13 – Transport Information

DOT Shipping Name	<b>Isopropanol</b>	DOT Packing Group	<b>II</b>	Dot Hazard Class	<b>3</b>
UN ID#	<b>1219</b>	DOT Label	<b>Flammable Liquid</b>		

### Section 14 – Regulatory Information

RCRA Hazardous Waste Number/Classification	<b>D001</b>	CERCLA Substance	<b>N/A</b>
Hazardous Air Pollutant (CAA)	<b>No</b>	SARA Toxic Chemical	<b>Yes, strong manufacturing only</b>
SARA 311/312 Codes	<b>N/A</b>	CERCLA Reportable Qty	<b>10,000 Lbs. (default)</b>