



# MSDS for Isopropyl Alcohol

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## 1. Product Identification

**Synonyms:** Isopropyl alcohol; sec-propyl alcohol; isopropanol; sec-propanol; dimethylcarbinol  
**CAS No.:** 67-63-0  
**Molecular Weight:** 60.10  
**Chemical Formula:** (CH<sub>3</sub>)<sub>2</sub>CHOH  
**Product Codes:**

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## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Isopropyl Alcohol	67-63-0	99.9%	Yes

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## 3. Hazards Identification

### Emergency Overview

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**WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION TO SKIN.**

SAF-T-DATA<sup>(tm)</sup> Ratings (Provided here for your convenience)

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Health Rating: 2 - Moderate

Flammability Rating: 3 - Severe (Flammable)

Reactivity Rating: 2 - Moderate

Contact Rating: 3 - Severe

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER

Storage Color Code: Red (Flammable)

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### Potential Health Effects

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#### Inhalation:

Inhalation of vapors irritates the respiratory tract. Exposure to high concentrations has a narcotic effect, producing symptoms of dizziness, drowsiness, headache, staggering, unconsciousness and possibly death.

#### Ingestion:

Can cause drowsiness, unconsciousness, and death. Gastrointestinal pain, cramps, nausea, vomiting, and diarrhea may also result. The single lethal dose for a human adult = about 250

mls (8 ounces).

**Skin Contact:**

May cause irritation with redness and pain. May be absorbed through the skin with possible systemic effects.

**Eye Contact:**

Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.

**Chronic Exposure:**

Chronic exposure may cause skin effects.

**Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or impaired liver, kidney, or pulmonary function may be more susceptible to the effects of this agent.

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## 4. First Aid Measures

**Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion:**

Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin Contact:**

Immediately flush skin with plenty of water for at least 15 minutes. Call a physician if irritation develops.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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## 5. Fire Fighting Measures

**Fire:**

Flash point: 12C (54F) CC

Autoignition temperature: 399C (750F)

Flammable limits in air % by volume: lel: 2.0; uel: 12.7

Listed fire data is for Pure Isopropyl Alcohol.

**Explosion:**

Above flash point, vapor-air mixtures are explosive within flammable limits noted above.

Contact with strong oxidizers may cause fire or explosion. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

**Fire Extinguishing Media:**

Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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## 6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

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## 7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Small quantities of peroxides can form on prolonged storage. Exposure to light and/or air significantly increases the rate of peroxide formation. If evaporated to a residue, the mixture of peroxides and isopropanol may explode when exposed to heat or shock.

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## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

For Isopropyl Alcohol (2-Propanol):

-OSHA Permissible Exposure Limit (PEL):400 ppm (TWA)

-ACGIH Threshold Limit Value (TLV):400 ppm (TWA), 500 ppm (STEL)

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Neoprene and nitrile rubber are recommended materials.

### **Eye Protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.