

Material Safety Data Sheet

Revision Issued: 3/29/2007

Supersedes: 8/25/1999

First Issued: 11/23/1994

Section I - Chemical Product And Company Identification

Product Name: Isopropyl Alcohol D.I. Water

CAS Number: 67-63-0

HBCC MSDS No. CI01050



HILL BROTHERS Chemical Co.

1675 NORTHMAIN STREET • ORANGE, CALIFORNIA 92867-3499
(714) 998-8800 • FAX: (714) 998-6310
<http://hillbrothers.com>

1675 No. Main Street, Orange, California 92867

Telephone No: 714-998-8800 | Outside Calif: 800-821-7234 | Chemtrec: 800-424-9300

Section II - Composition/Information On Ingredients

Chemical Name	CAS Number	%	Exposure Limits (TWAs) in Air		
			ACGIH TLV	OSHA PEL	STEL
Isopropanol	67-63-0	90-95	200 ppm	400 ppm	500 ppm
				980 mg/m ³	1,225 mg/m ³

Section III - Hazard Identification

Summary of Acute Health Hazards

Ingestion: Slightly toxic. Ingestion of a large quantity may cause drowsiness and loss of consciousness. Stomach cramps, pain, nausea, vomiting, and diarrhea may also occur. The single lethal dose for a human adult = about 250 mls (8 ounces).

Inhalation: Low concentrations may cause mild irritation of eyes, nose, and throat. Concentrations above the TLV may result in headache and drowsiness. Exposure to high concentrations has a narcotic effect, producing symptoms of dizziness, drowsiness, headache, staggering, unconsciousness and possibly death.

Skin: Prolonged contact may cause drying and cracking of skin.

Eyes: Causes slight to moderate irritation, with possible corneal injury.

Signs and Symptoms of Exposure: Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance. Other signs and symptoms or central nervous system (CNS) depression may include headache, nausea, and lack of coordination.

Effects of Overexposure: N/A

Medical Conditions Generally Aggravated by Exposure: Persons with pre-existing skin disorders or impaired liver, kidney, or pulmonary function may be more susceptible to the effects of this agent.

Note to Physicians: Causes central nervous system depression. Potential for chemical pneumonitis. Consult a Poison Control Centre for guidance.

Section IV - First Aid Measures

Ingestion: Do Not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30cc (2 tablespoons) syrup of ipecac. If ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. GET PROMPT MEDICAL ATTENTION.

Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. GET PROMPT MEDICAL ATTENTION.

Skin: Flush skin with water. If irritation occurs. GET PROMPT MEDICAL ATTENTION.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. GET PROMPT MEDICAL ATTENTION.

Section V - Fire Fighting Measures

Flash Point: 14°C (57°F)

Autoignition Temperature: 399°C (750°F)

Lower Explosive Limit: 2.0%

Upper Explosive Limit: 12.7%

Unusual Fire and Explosion Hazards: Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges, or other ignition sources at locations distant from handling point. Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture, Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Carbon monoxide may be evolved if incomplete combustion occurs. The vapor is heavier than air, spreads along the ground and distant ignition is possible.

Extinguishing Media: Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into the aquatic environment.

Special Firefighting Procedures: Use self-contained breathing apparatus and full protective clothing.

Section VI - Accidental Release Measures

WARNING: This is a flammable material. Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. Monitor area with combustible gas indicator. Vapor may form an explosive mixture with air. Large spills: evacuate the area of unprotected personnel. Wear appropriate respirator and protective clothing. Shut off source of leak only if safe to do so. Dike and contain. If vapor clouds forms, water fog may be used to suppress; contain run-off, remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal, flush area with water to remove trace residue; Dispose of flush solutions as above. For small spills: take up with an absorbent material and place in non-leaking containers; seal tightly for proper disposal.

Section VII - 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. Do NOT use compressed air for filling, discharging, or handling operations.

Other Precautions: Do not store or handle in aluminum equipment at temperatures above 120°F.

Section VIII - Exposure Controls/Personal Protection

Respiratory Protection: Self-contained breathing apparatus in high concentrations. 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.

Ventilation: This product should be confined within closed equipment, in which case general (mechanical) room ventilation should be satisfactory. Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

Protective Clothing: Avoid prolonged or repeated contact with skin. Wear chemical-resistant gloves and other clothing as required to minimize contact. Test data from published literature and/or glove and clothing manufacturers indicate the best protection is provided by nitrile, neoprene and natural rubber gloves.

Eye Protection: Avoid contact with eyes. Wear chemical goggles if there is likelihood of contact with eyes. Maintain eye wash fountain and quick-drench facilities in work area.

Other Protective Clothing or Equipment: Use explosion-proof ventilation as required to control vapor concentrations. Eye wash fountains and safety showers should be available for emergency use.

Work/Hygienic Practices: Wash with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse.

Section IX - Physical and Chemical Properties

Physical State: Liquid

pH: N/A

Melting Point/Range: : -88.3°C (-127°F) **Boiling Point/Range:** 78-81°C (172-178°F)

Appearance/Color/Odor: Colorless liquid; like ethyl alcohol, sharp, somewhat unpleasant

Solubility in Water: Miscible in Water

Vapor Pressure(mmHg): 44 @ 25°C (77°F)

Specific Gravity(Water=1): 0.79

Molecular Weight: 60.10

Vapor Density(Air=1): 2.1

% Volatiles: 100

How to detect this compound : Mild odor **Evaporation (N-Butyl Acetate=1):** 2.83

Section X - Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid: Avoid Heat, Sparks, and Flames.

Materials to Avoid: Concentrated nitric and sulfuric acids, strong oxidizers, aldehydes, and halogen compounds. Do Not Store or Handle in Aluminum Equipment at temperatures above 120°F. Heat, flame, acetaldehyde, chlorine, ethylene oxide, hydrogen-palladium combination, hydrogen peroxide-sulfuric acid combination, potassium tert-butoxide, hypochlorous acid, isocyanates, nitroform, phosgene, oleum and perchloric acid.

Hazardous Decomposition Products: Burning may produce carbon monoxide and unidentified organic compounds may be formed during combustion.

Section XI - Toxicological Information

Acute Oral Toxicity: Low toxicity: LD50 > 2000 mg/kg, Rat
Acute Dermal Toxicity: Low toxicity: LD50 > 2000 mg/kg, Rabbit
Acute Inhalation Toxicity: Low toxicity: LC50 > 5000 ppm/1 Hour, Rat
High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Section XII - Ecological Information

Acute Toxicity

Fish:	Low toxicity: LC/EC/IC50 > 100 mg/l
Aquatic Invertebrates:	Low toxicity: LC/EC/IC50 > 1000 mg/l
Algae:	Expected to have low toxicity: LC/EC/IC50 > 1000 mg/l
Microorganisms:	Low toxicity: LC/EC/IC50 > 1000 mg/l

Mobility: If product enters soil, it will be highly mobile and may contaminate groundwater. Dissolves in water.

Persistence/degradability: Oxidises rapidly by photo-chemical reactions in air. Readily biodegradable meeting the 10 day window criterion.

Section XIII - Disposal Considerations

Dispose of in accordance with applicable local, county, state and federal regulations.

Section XIV - Transport Information

DOT Proper Shipping Name: Isopropanol or Isopropyl Alcohol

DOT Hazard Class/ I.D. No.: 3, UN1219, II

Section XV - Regulatory Information

SARA Hazard Categories (311/312): Immediate (Acute) Health Hazard. Fire Hazard.

Uniform Fire Code Rating: Class IB Flammable Liquid.

NFPA Rating: Health - 1; Fire - 3; Reactivity - 0

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

Carcinogenicity Lists: No **NTP:** No **IARC Monograph:** No **OSHA Regulated:** Yes

Section XVI - Other Information

Synonyms/Common Names: 2-Propanol, IPA, Isopropanol

Chemical Family/Type: Alcohol

Sections Changed Since Last Revision: II, III, V, VI, VII, IX, XI, XII, XV

IMPORTANT! Read this MSDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This MSDS has been prepared according to the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The MSDS information is based on sources believed to be reliable. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Also, additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks prior to use, and then to exercise appropriate precautions for protection of employees and others.