



Special Effects Equipment & Supplies

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For Chemical Emergency call Infotrac @ 1-800-535-5053

### Material Safety Data Sheet

#### Section 1 - Product Identification

**Product Name:** Isopropyl Alcohol

**Chemical Name:** Isopropyl Alcohol

#### Section 2 - Ingredients

<u>Chemical Name</u>	<u>CAS#</u>	<u>Percentage</u>
Isopropyl Alcohol	67-63-0	90-100%
Water	7732-18-5	0-10%

<b>Exposure Limits</b>	<b>Permissible Exposure Limit:</b>	400 ppm
	<b>Ceiling Limits:</b>	N/A
	<b>Short Term Exposure Limit:</b>	N/A
	<b>Can be absorbed through skin?:</b>	Yes

#### Section 3 - Physical/Chemical Characteristics

<b>Boiling Point</b>	180F	<b>Solubility in Water</b>	Miscible.
<b>Vapor Pressure (mm Hg)</b>	44	<b>Specific Gravity (H2O = 1)</b>	0.79
<b>Vapor Density (Air = 1)</b>	2.1	<b>Melting Point</b>	-128F
<b>Appearance and Odor / Odor threshold</b>	Clear, colorless liquid. Odor of rubbing alcohol.		
<b>Evaporation Rate (Butyl Acetate = 1)</b>	2.83	<b>PH</b>	N/A
<b>Freezing Point</b>	N/A		

#### Section 4 - Fire and Explosion Data

<b>Lower Explosive/Flammability Limit</b>	2.0	<b>Flash Point</b>	54F
<b>Upper Explosive/Flammability Limit</b>	12.7	<b>Autoignition Temperature</b>	750F

<b>Extinguishing Media</b>	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.		
	<b>Fire Fighting Measures</b>		
	See Extinguishing Media for additional 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.		
<b>Fire or Explosion Hazards</b>	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.		

### Section 5 - Reactivity Data

<b>Chemical Stability</b>	Stable under ordinary conditions or use and storage. Heat and sunlight can contribute to instability.
<b>Incompatibility</b>	Heat, flame, strong oxidizers, acetaldehyde, acids, chlorine, ethylene oxide, hydrogen-palladium combination, hydrogen peroxide-sulfuric acid combination, potassium tert-butoxide, hypochlorous acid, isocyanates, nitroform, phosgene, aluminum, oleum and perchloric acid.
<b>Hazardous Decomposition or Byproducts</b>	Carbon dioxide and carbon monoxide may form when heated to decomposition.
<b>Hazardous Polymerization</b>	Will not occur.

### Section 6 - Health Hazard Data

<b>Routes of Entry</b>	Inhalation, ingestion, skin contact, & eye contact.
<b>Health Hazards</b>	See Signs and Symptoms of Exposure. Chronic exposure may cause skin effects.
<b>Carcinogenicity</b>	Not classifiable as a human carcinogen.
<b>Signs and Symptoms of Exposure</b>	<p><b>Inhalation:</b> 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.</p> <p><b>Ingestion:</b> Can cause drowsiness, unconsciousness, and death. Gastrointestinal pain, cramps, nausea, vomiting, and diarrhea may also result. The single lethal dose for a human = about 250mls (8 ounces)</p> <p><b>Skin Contact:</b> May cause irritation with redness and pain. May be absorbed through skin with possible systemic effects.</p> <p><b>Eye Contact:</b> Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.</p>
<b>Medical conditions generally aggravated by exposure</b>	Persons with pre-existing skin disorders or impaired liver, kidney or pulmonary function may be more susceptible to the effects of this agent.
<b>Emergency and First Aid Procedures</b>	<p><b>Eye Contact:</b> Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.</p> <p><b>Skin Contact:</b> Immediately flush skin with plenty of water for at least 15 minutes. Call a physician if irritation develops.</p> <p><b>Inhalation:</b> Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.</p> <p><b>Ingestion:</b> Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.</p>

### Section 7 - Precautions for Safe Handling and Use

<b>Spill or Release Data</b>	<p>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.</p>
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### Section 7 - Precautions for Safe Handling and Use Cont.

<b>Waste Disposal Method</b>	Whatever cannot be saved for recovery or recycling should be handled as
	hazardous waste and sent to a RCRA approved incinerator or disposed in a
	RCRA approved waste facility. Processing, use or contamination of this product
	may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.
<b>Handling and Storage</b>	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.	
<b>Other Precautions</b>	N/A

### Section 8 - Control Measures

<b>Respiratory Protection</b>	If the exposure limit is exceeded, a full facepiece respirator with organic vapor
	cartridge may be worn up to 50 times the exposure limit of 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.	
<b>Skin Protection</b>	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.
<b>Eye Protection</b>	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.
<b>Other Protective Equip.</b>	N/A
<b>Ventilation</b>	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, <i>Industrial Ventilation, A Manual of Recommended Practices</i> ,	
most recent edition, for details.	
<b>Work/Hygienic Practices</b>	N/A

To the best of our knowledge, the information contained above is accurate. However, neither the above named supplier nor any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained above.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described above, we cannot guarantee that these are the only hazards that exist.

Prepared: October 2006