

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name: Isopropyl Alcohol

Chemical name: ISOPROPYL ALCOHOL

CAS: # 67-63-0

2. Hazards Identification Hazards Identification

Emergency overview: WARNING. Flammable liquid and vapor. Causes eye irritation. Harmful if swallowed - may enter lungs if swallowed or vomited. Prolonged or repeated skin contact may cause drying, cracking, or irritation. High vapor concentrations may cause drowsiness and irritation of the eyes or respiratory tract.

Potential health effects:

- **Routes of exposure:** Inhalation. Ingestion. Skin contact. Eye contact.
- **Eyes:** Causes eye irritation. High vapor/aerosol concentrations may be irritating.
- **Skin:** Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.
- **Inhalation:** May cause irritation to the mucous membranes and upper respiratory tract. In high concentrations, vapors and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea.
- **Ingestion:** Irritating. May cause nausea, stomach pain and vomiting. Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis.
- **Target organs:** Eyes. Respiratory system. Skin. Central nervous system.
- **Chronic effects:** Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Potential environmental effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
ISOPROPYL ALCOHOL	67-63-0	98 - 100

4. First Aid Measures

First aid procedures:

- **Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
- **Skin contact:** Wash off with soap and water. Get medical attention if symptoms occur. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.
- **Inhalation:** Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
- **Ingestion:** Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

Notes to physician: Treat symptomatically.

General advice: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures:

Flammable properties: HIGHLY FLAMMABLE! Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Heat may cause the containers to explode.

Extinguishing media:

- **Suitable extinguishing media:** Water spray. Foam. Dry powder. Carbon dioxide (CO₂).
- **Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters:

- **Specific hazards arising from the chemical:** Can be ignited easily and burns vigorously. Vapor from the solvent may accumulate in container headspace resulting in flammability hazard.
- **Protective equipment for firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire fighting equipment/instructions: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Move containers from fire area if you can do so without risk. For massive fire in

cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Some of these materials, if spilled, may evaporate leaving a flammable residue. Cool containers exposed to flames with water until well after the fire is out.

Specific methods: In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers.

Hazardous combustion products: Carbon monoxide and carbon dioxide.

6. Accidental Release Measures:

Personal precautions: Wear appropriate protective equipment and clothing during clean-up. Keep unnecessary personnel away. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

Methods for containment: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Dike the spilled material, where this is possible.

Methods for cleaning up: Use only non-sparking tools. All equipment used when handling the product must be grounded.

- **Large Spills:** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Dike far ahead of spill for later disposal.
- **Small Spills:** Wipe up with absorbent material (e.g. cloth, fleece). Collect in a non-combustible container for prompt disposal.
- Never return spills in original containers for re-use. Clean surface thoroughly to remove residual contamination. Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling: DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Wear appropriate personal protective equipment. Avoid breathing high vapor concentrations. Avoid contact with eyes and prolonged skin contact. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

Storage: Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

8. Exposure Controls

Material	Type	Value
Isopropyl Alcohol (67-63-0)	STEL	400.0000 ppm
	TWA	200.0000 ppm

9. Physical & Chemical Properties

Appearance	Clear
Color	Colorless
Odor	Aceton-like. Alcoholic
Physical state	Liquid
Form	Liquid
Melting point	-88.5 ⁰ C
Boiling point	82.5 ⁰ C
Flash point	12 ⁰ C closed cup
Evaporation rate	2.83 BuAc
Flammability limits in air, upper, % by volume	12.7
Flammability limits in air, lower, % by volume	2
Specific gravity	0.7865
Percent volatile	100%
Shelflife	36 months min

10. Chemical Stability & Reactivity Information:

Chemical stability: Stable under normal temperature conditions.

Conditions to avoid: Heat, flames and sparks. Sunlight.

Incompatible materials: Strong oxidizing agents. Acetaldehyde. Acids. Chlorine. Ethylene Oxide Hydrogen peroxide (H₂O₂) and Sulfuric acid. Isocyanates. Aluminum.

Hazardous decomposition products: At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

Possibility of hazardous reactions: Will not occur.

11. Toxicological Information

Product Test Results: Acute Dermal LD50 Rabbit: 12800 mg/kg; Acute Oral LD50 Rat: 5045 mg/kg

Acute effects: Harmful if swallowed - may enter lungs if swallowed or vomited.

Sensitization: Not a skin sensitizer.

Local effects: Causes eye irritation. Prolonged or repeated skin contact may cause drying, cracking, or irritation. High vapor concentrations may cause drowsiness and irritation of the eyes or respiratory tract.

Chronic effects: Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Neurological effects: High vapor/aerosol concentrations (attainable only at elevated temperatures) may Neurological effects cause central nervous system effects such as dizziness, drowsiness or headaches.

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive effects: Contains no ingredient listed as toxic to reproduction

Teratogenicity: No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

Symptoms and target organs: Moderate eye irritation. Upper respiratory tract irritation. Drowsiness and dizziness.

Epidemiology: No epidemiological data is available for this product.

12. Ecological Information

Product Test Result: LC50 Water flea (*Daphnia magna*): 10000 mg/l 24.00 hours. LC50 Western mosquitofish (*Gambusia affinis*): > 1400 mg/l 96.00 hours.

Ecotoxicity: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Environmental effects: Ecological injuries are not known or expected under normal use.

Persistence and degradability: Expected to be readily biodegradable.

Partition coefficient: 0.05

13. Disposal Considerations

Disposal instructions: Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. All wastes must be handled in accordance with local, state and federal regulations.

Waste from residues / unused products: Dispose of in accordance with local regulations.

Contaminated packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container. Offer rinsed packaging material to local recycling facilities.

14. Transport Information

Proper shipping name: ISOPROPANOL; or ISOPROPYL ALCOHOL

Hazard class: 3

UN number: UN1219

Packing group: II

15. Regulatory Information

WHMIS status: Controlled

WHMIS classification: B2 - Flammable/Combustible. D2B - Other Toxic Effects-TOXIC

Saf-T-Data Health: 1 - Slight

Flammability: 3 - Severe (Flammable)

Reactivity: 1 - Slight

Contact: 2 - Moderate

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

16. Other Information

NFPA ratings Health: 2. **Flammability:** 3. **Instability:** 0

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