

MATERIAL SAFETY DATA SHEET

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24-HOUR CHEMICAL EMERGENCIES
INFOTRAC 800-535-5053

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SECTION 1 - PRODUCT INFORMATION

Product: ISOPROPYL ALCOHOL
Chemical Family: Alcohol
Synonym: IPA, Isopropanol, 2-Propanol
Stock Number: Technical Grade: 1104
Electronic/Semi Grade: 1954
Reconstituted Grade: N/A
A.C.S. Reagent Grade: 3954

Department of Transportation (DOT) - Identification:

DOT Proper Shipping Name: Isopropanol
DOT Hazard Class: 3, Packing Group II
DOT Identification Number: UN1219
Emergency Response Guide Number: 129
Reportable Quantity (RQ): N/A

Hazardous Waste Identification

Waste Number: US EPA D001 California: 212
South Coast Air Quality Management District:
This chemical is photochemically reactive.
Volatile Organic Compound (VOC) = 785 GRAMS/LITER

SECTION 2- PRODUCT COMPOSITION DATA

<u>COMPONENT #</u>	<u>COMPONENT</u>	<u>CAS #</u>	<u>VOL/PERCENT</u>
1	Isopropyl alcohol	67-63-0	100

SECTION 3 - PHYSICAL DATA

Boiling Point: 180°F
Vapor Density (Air= 1): 2.1
% Volatile by Volume: 100%
Specific Gravity (25/25C): 0.79
Vapor Pressure (mm Hg): 32 @ 20C
Solubility in water @25C (wt %): Complete
Evaporation Rate (n-Butyl Acetate = 1): 1.4

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Appearance: Colorless liquid
Odor: Mild Odor
Shelf Life: 3 Years

SECTION 4 - FIRE AND EXPLOSION HAZARDS

Flash Point: 53°F (TCC)
Flammable Limits: Volume in upper limits - 12%
Volume in lower limits - 2.5%

EXTINGUISHING MEDIA:

Use water fog, foam, dry chemical, or CO₂. Do not use a direct stream of water; product will float and can be reignited on surface of water.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:

Warning. Flammable. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots) including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

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.

SECTION 5 - REACTIVITY

STABILITY: Reacts with air to form dangerous peroxides

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID:

Avoid heat, sparks, flame, contact with strong oxidizing agents, acetaldehyde, chlorine, ethylene oxide, acids, and isocyanates. Do not store or handle in aluminum equipment or at temperatures above 120°F.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide and unidentified organic compounds may be formed during combustion.

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SECTION 6A - HEALTH INFORMATION - HEALTH RATING

HAZARDOUS MATERIALS IDENTIFICATION SYSTEMS (NFPA)

Health (2) Fire (3) Reactivity (0)

Based on the National Fire Protection Association Standard 704

SECTION 6B - HEALTH INFORMATION - ACUTE TOXICITY DATA

COMPONENT ACUTE ORAL (LD50) ACUTE DERMAL (LD50) ACUTE INHALATION (LC50)

1 RAT: 5045 MG/KG RABBIT: 12800 MG/KG RAT: 12000ppm/8hr

SECTION 6C - HEALTH INFORMATION - OCCUPATIONAL EXPOSURE LIMITS

Comp #	CAL/OSHA PEL (PPM)			OSHA PEL (PPM)			ACGIH TLV (PPM)	
	PEL/TWA	CEILING	STEL	PEL/TWA	CEILING	STEL	TLV/TWA	STEL
1	400	---	500	400	-	-	400	500

SECTION VID - HEALTH INFORMATION - EFFECTS OF EXPOSURE

Effects described in this section are believed not to occur if exposures to the product are maintained below the occupational exposure limits listed in section 6c.

Primary route of entry: Inhalation (x) Skin (x) Ingestion (x)

AGGRAVATED MEDICAL CONDITIONS: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

EFFECTS OF OVEREXPOSURE:

Inhalation:

Vapors may be irritating to the nose, throat, and respiratory tract. High vapor concentrations may cause central nervous system (CNS) depression.

Skin:

Mildly irritating to the skin.

Eyes:

Liquid is irritating to the eyes.

Ingestion:

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Irritating to the gastrointestinal tract; causing abdominal pain and vomiting; may cause CNS depression, low blood pressure, rapid heart beat and liver damage.

Signs and symptoms of excessive exposure:

Irritation as noted above. Early to moderate CNS (Central Nervous System) depression may be evidenced by giddiness, headache, dizziness, and nausea. In extreme cases, unconsciousness, respiratory depression, and death may occur. Liver damage may be evidenced by loss of appetite, jaundice (yellowish skin color) and sometimes pain in the upper right side of the abdomen.

EMERGENCY FIRST AID:

Eye contact:

Immediately flush eyes with plenty of water for at least fifteen minutes while holding eyelids open. Get medical attention.

Skin contact:

Remove contaminated clothing and shoes. Flush skin with water. If irritation occurs, get medical attention. Launder contaminated clothes before reuse.

Inhalation:

Remove victim to fresh air. Have qualified individual provide oxygen if breathing is difficult. Administer artificial respiration if victim has stopped breathing. Get medical attention.

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 tablespoon) 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 medical attention.

Note to physician:

*If victim is a child, give no more than 1 glass of water and 15cc or 1 tablespoon syrup of IPECAC.

If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SECTION VII - EMPLOYEE PROTECTION
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Ventilation:

Maintain work place vapor concentrations below the occupational exposure limits listed in section 6c. Do not use in closed or confined space. Open doors and windows. Use adequate explosion-proof ventilation to maintain exposures below the OSHA-recommended exposure limits.

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Protective measures for maintenance:

Exercise reasonable care and caution. Store in a cool place, away from heat or aluminum containers in which temperature may exceed 120°F. Concentrated vapors are heavier than air and will collect in low areas such as pits, degreasers, storage tanks, and other confined areas. Do not enter areas where vapors of this product are suspected unless a NIOSH-approved self-contained breathing apparatus is used and an experienced, trained observer is present for assistance.

Industrial hygiene:

Avoid skin contact and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands prior to eating, drinking, or using restroom. To determine exposure level(s), monitoring should be performed regularly. Safety shower and eyewash station should be available.

Respiratory protection:

Avoid breathing of vapors. If exposure exceeds or may exceed occupational exposure limits (section 6c), use a NIOSH-approved respirator to prevent overexposure. Use either an atmosphere-supplying or an air-purifying respirator for organic vapors.

Skin protection:

Avoid prolonged or repeated contact with skin. Wear chemical-resistant gloves and other clothing as required to minimize contact.

Eye protection:

Avoid contact with eyes. Wear safety glasses or goggles as appropriate. Contact lenses should not be worn. Use face shield if there is danger of splashing.

SECTION VIII - SPECIAL PRECAUTIONS

Handling and Storage - Handle with reasonable care and caution. Avoid breathing vapors. Keep liquid and vapor away from heat, sparks and flame. Surfaces that are sufficiently hot may ignite liquid product in the absence of sparks or flame. Extinguish pilot light, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone. Vapors may accumulate and travel to ignition sources distant from the handling site; flash-fire can result. Keep containers closed when not in use. Use with adequate ventilation. Vapors of this product are heavier than air and will collect in low areas such as pits, degreasers, storage tanks, and other confined areas. Do not enter these areas where vapors of this product are suspected unless special breathing apparatus is used and an observer is present for assistance.

Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

Static electricity may accumulate and create a fire hazard. To avoid static electricity, ground fixed equipment, transfer containers and equipment.

Store securely closed drums in a cool place. Storage tanks should be adequately vented for filling and pressure equalization. Vents from indoor tanks should terminate outdoors.

Do not store or handle in aluminum equipment at temperatures over 120 degree fahrenheit.

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Spill and Disposal - Evacuate the area, ventilate, and avoid breathing vapors. Dike area to contain spill. Use proper absorbent material. Contaminated absorbent material is disposed as hazardous waste. Avoid contamination of ground and surface waters. Do not flush to sewer.

Waste Disposal - Recovered liquids may be sent to a licensed reclaimer or incineration facility. Contaminated material must be disposed at a permitted hazardous waste management facility.

SECTION IX - SARA TITLE III INFORMATION

SARA Title III:

	Reportable Quantity (40 CFR 302.4)	SARA 311/312 Categories	SARA 313	SARA 302 Extremely Hazardous Substance
Isopropyl alcohol	-	H-1, P-3	-	-

H-1: Immediate (acute) health hazard

H-2: Delayed (chronic) health hazard

P-3: Fire hazard

Hazard category for SARA Title III Section 311/312 reporting

HEALTH

H-1 = Immediate (acute) health hazard

H-2 = Delayed (chronic) health hazard

PHYSICAL

P-3 = Fire Hazard

P-4 = Sudden release of pressure hazard

P-5 = Reactive Hazard

24 Hour Emergency Information Line: INFOTRAC 800-535-5053

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