

Safety Data Sheet

Section 1: Identification

Product Name: Isopropanol

Synonyms: Isopropyl Alcohol 70% 2-Propanol IPA70%

CAS No.: 67-63-0

Chemical Formula: C₃H₈O

Distributor:

Section 2: Hazard(s) Identification

Emergency Overview: Hygroscopic. This substance has caused adverse reproductive and fetal effects in animals.
May form explosive peroxides.
Causes digestive and respiratory tract irritation.
Target Organs: Kidneys, central nervous system, gastrointestinal system, cardiovascular system.

GHS Classification:	Category
Flammable liquids	2
Skin irritation	3
Eye irritation	2A
Specific target organ toxicity-single exposure	3

GHS Label elements:

Pictograms:



Signal Word:

Danger

Hazard Statements:

Code	Description
H225	Highly flammable liquid and vapor.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary Statements:

Code	Description
P210	Keep away from heat/spark/open flames/ hot surfaces - No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P305, P351, P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other classifications:**NFPA Rating:**

Health: 1
 Fire: 3
 Reactivity: 0

HMIS:

Health: 2
 Flammability: 3
 Physical: 0

Section 3: Composition, Information on Ingredients

Component	CAS No	Index No.	Concentration	EINECS No
2-Propanol	67-63-0	603-117-00-0	70 %	200-661-7

Section 4: First-aid measures

Inhalation:	Remove to fresh air. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen provided a qualified individual is present. Get medical assistance.
Ingestion:	Do NOT induce vomiting. Rinse mouth and rest. Call physician or poison control center immediately.
Skin Contact:	Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse or discard if it cannot be thoroughly cleaned. Get medical aid.
Eye Contact:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses if present and easy to do. Get medical aid.

Section 5: Fire-fighting measures

Conditions of flammability:	Flammable Liquid will burn if involved in a fire.
Extinguishing Media:	Do NOT use straight streams of water. Material is lighter than water and a fire may be spread using water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.
Special protective equip.:	Wear a self-contained breathing apparatus MSHA/NIOSH (approved or equivalent), and full protective gear.
Hazardous combustion products:	Carbon oxides
Special Information:	Containers may explode in the heat of a fire. Vapors may be heavier than air and can collect in low or confined areas. Vapors can travel to a source of ignition and flash back. Vapors may form an explosive mixture with air.

Section 6: Accidental release measures

Personal precautions:	Wear personal protection equipment.
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods of containment/cleanup:	Clean up spills immediately. Absorb spill with inert material, then place into a chemical waste container. A vapor suppressing foam may be used to reduce vapors.

Section 7: Handling and storage

Handling:	<p>Wash thoroughly after handling.</p> <p>Wear protective gloves, clothing, eye & face protection</p> <p>Remove all sources of ignition.</p> <p>Use a spark-proof tool.</p> <p>Provide ventilation.</p> <p>Ground and bond containers when transferring material.</p> <p>Use spark-proof tools and explosion proof equipment.</p> <p>Loosen closure cautiously before opening. Contents may develop pressure upon prolonged storage.</p> <p>Empty containers retain product residue, (liquid and/or vapor), and can be dangerous.</p> <p>Take precautionary measures against static discharges.</p> <p>Use only in a chemical fume hood.</p> <p>Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.</p>
Storage:	<p>Keep away from sources of ignition, heat, sparks, and flame.</p> <p>Keep container tightly closed and store in a cool, dry, well-ventilated area, away from direct sunlight.</p> <p>After opening, purge container with nitrogen before re-closing.</p>

Section 8: Exposure controls/ personal protection

Exposure Limits:	<u>Regulator:</u>	<u>Test:</u>	<u>Allowance:</u>
	ACGIH	TWA/ STEL	400ppm
	NIOSH	REL	400 ppm (10 hours)
	NIOSH	STEL	500ppm
	OSHA	TWA	400 ppm
Engineering Controls:	<p>Use explosion-proof ventilation equipment.</p> <p>Use only under a chemical fume hood.</p> <p>An emergency eye wash/shower must be readily accessible to the work area.</p>		
Personal Protective Equipment:			
Personal Respirators:	When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.		
Skin Protection:	Wear appropriate protective gloves and clothing to prevent skin exposure.		
Eye Protection:	Wear appropriate protective eyeglasses or chemical safety goggles.		

Section 9: Physical and chemical properties

Appearance

Physical State:	Liquid
Color:	Colorless
Odor:	Solvent odor - alcohol-like, pleasant
pH:	No data available.

Specific Temperatures:

Freezing/Melting Point:	-88°C	-126.4°F
Boiling Point:	82°C	179.6°F
Decomposition temperature:	No data available.	

Flammability Characteristics:

Flash Point:	12°C	53.60°F
Auto-ignition Temperature:	399°C	750.2°F

Explosivity Characteristics:

Lower (LEL):	2.0% (V)
Upper (UEL):	12.7% (V)
Vapor Pressure:	45.4 mm Hg @ 25°C

Density:

Vapor Density (air=1):	2.1
Relative Density (water=1):	0.785

Solubility:

Miscible.

Complementary Data:

Molecular Weight:	60.14 g/mol
Evaporization Rate:	2 (n-butyl acetate=1)

Optional Data:

Viscosity:	2.04 Centipoise at 25°C
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Section 10: Stability and reactivity

Stability:	Stable at room temperature in closed containers under normal storage and handling conditions. Distillation may lead to the formation of peroxides. This material may be sensitive to peroxide formation.
Conditions to Avoid:	Light, ignition sources, acids, excess heat, exposure to moist air or water, oxidizers.
Incompatibilities:	Avoid contact with strong oxidizing agents. Attacks some forms of plastics, rubbers, and coatings.
Hazardous Decomposition Products:	Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Section 11: Toxicological information

Potential health effects:

Inhalation: May cause: cough, dizziness, drowsiness, sore throat, abdominal pain, labored breathing, nausea, vomiting, and unconsciousness,

Skin Contact: Contact with skin may cause dry skin.

Eye Contact: Contact with eyes may cause redness.
Serious damage is not expected to occur.

Ingestion: May cause abdominal pain, labored breathing, nausea, vomiting, unconsciousness, cough, dizziness and sore throat.

Chronic Effects: Prolonged or repeated skin contact may cause defatting and dermatitis.
May cause allergic skin reaction in some individuals.

Numerical measures of Toxicity -

Acute Toxicity:	<u>Test</u>	<u>Subject</u>	<u>Value</u>
Oral	LD 50	Rat	5,045 mg/kg
Skin	LD 50	Rabbit	12,800 mg/kg

Additional Information: RTECS#: NT8050000

Carcinogenicity: This material is not carcinogenic according to IARC, NTP, or OSHA>

Section 12: Ecological information

Ecotoxicity:	<u>Test</u>	<u>Subject</u>	<u>Value</u>
	Modified ASTM D 1345 bioassay	Goldfish	> 5,000 mg/L (24 hours)
	Static bioassay	Fathead Minnow	11,830 mg/L (1 hours)
	LC50	Fathead Minnow	9,640 mg/L (96 hours)
	EC 50	Crustaceans	1,400 mg/L (48 hours)

Persistence and degradability: Expected to be highly biodegradable

Bioaccumulative potential: The potential for bioconcentration in aquatic organisms is low.

Mobility in soil: This material is expected to have high mobility in soil.

Other adverse effects: Dangerous to aquatic life in high concentrations.

Section 13: Disposal considerations

Product: Recover or recycle if possible.

Container: Empty container may retain product residues.

Disposal: Dispose of contents in accordance with local/regional/national/ international regulations.

Section 14: Transport information

The information in this section is for reference only and should not take the place of a bill of lading specific to an order.

UN number: UN 1219
UN proper shipping name: Isopropanol
Transport hazard class: 3
Packing group number: II
Labels & Placards: Flammable
Marine Pollutant: No

Section 15: Regulatory information**US FEDERAL**

TSCA: Isopropanol is listed on the TSCA inventory.

Section 16 - Other Information

SDS Creation Date: 05/03/2024
Revision date: 05-03-2024

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