

Isopropyl Alcohol

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Trade name	Isopropyl Alcohol		
Synonyms	Dimethyl carbinol, Isopropanol		
Manufacturer/Supplier	SASOL CHEMICALS NORTH AMERICA LLC (An affiliate of Sasol North America Inc.)		
Address	900 Threadneedle, Houston, TX 77079		
Telephone	CHEMTREC North America Transportation Emergency (24-hr)	(800) 424-9300	
	CHEMTREC World Wide	(703) 527-3887	
	Other Emergencies (24-hr)	(337) 494-5142	
	MSDS and Product Information (8:00am-4:30pm CST)	(281) 588-3491	
	Health and Safety Information (8:00am-4:00pm CST)	(281) 588-3492	

SECTION 2 COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS-No.</u>	<u>Weight %</u>
2-Propanol	67-63-0	100

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance	Colorless liquid
Odor	Aromatic. Pleasant resembling a mixture of ethanol and acetone. (slight)
Precautions	WARNING! FLAMMABLE LIQUID AND VAPOR Keep away from heat and flame. CAUSES EYE IRRITATION AND MAY CAUSE SKIN IRRITATION. Use only with adequate ventilation. Avoid contact with skin, eyes and clothing.
Environmental precautions	Do not flush into surface water or sanitary sewer system. Low toxicity to aquatic organisms such as bacteria, algae, protozoa and fish. Readily biodegradable.

POTENTIAL HEALTH EFFECTS

Eyes Irritating to eyes. May cause corneal inflammation.

Isopropyl Alcohol

- Skin** Repeated or prolonged contact can cause redness, irritation and scaling of the skin (dermatitis). Normal care and personal hygiene should prevent skin effects.
- Inhalation** Irritation of the nose and throat, dizziness, and headache.
- Ingestion** Depression of central nervous system can occur. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

(See Section 11 for Toxicological Information)

SECTION 4 FIRST AID MEASURES

- Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- Skin contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.
- Inhalation** Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.
- Ingestion** If swallowed, call a physician or poison control center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

- Flash point** 11.67 °C closed cup 53 °F 18.3 °C open cup 64.9 °F
- Autoignition temperature** 398.89 °C 750 °F
- Flammable limits in air % by volume** **Lower explosion limit:** 2 %(V)
Upper explosion limit: 12 %(V)
- Fire and explosion** Vapours may form explosive mixture with air. Flash back possible over considerable distance. Use water spray to disperse the vapors. NFPA Class IB flammable liquid.
- Extinguishing media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Fire fighting instructions** Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection.

Isopropyl Alcohol

Further information Keep containers and surroundings cool with water spray. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak Evacuate personnel to safe areas. Remove all sources of ignition. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Do not flush into surface water or sanitary sewer system.

SECTION 7 HANDLING AND STORAGE

Safe handling advice Ensure all equipment is electrically grounded before beginning transfer operations.

Storage/Transport pressure Ambient.

Further information on storage conditions Keep away from heat and sources of ignition.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

Air contaminant levels should be controlled below the PEL or TLV for this product (see Exposure Guidelines). Mechanical ventilation may be necessary if working with this product in enclosed areas and/or at elevated temperatures. Use explosion-resistant equipment

PERSONAL PROTECTIVE EQUIPMENT

Eyes When contact with liquid is possible, use a face shield and/or chemical splash goggles. Otherwise use safety glasses with side shields or goggles.

Skin Wear suitable protective clothing, gloves and eye/face protection.

Inhalation Respiratory protection is normally not required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. NIOSH-approved organic vapor air-purifying respirator, self-contained breathing apparatus, or air-supplied respirators where there may be potential for overexposure.

Isopropyl Alcohol

EXPOSURE GUIDELINES

Components Exposure limit(s)

2-Propanol OSHA PEL 400 ppm (983 mg/m³)
 ACGIH TLV (8-hour) 400 ppm (983 mg/m³)
 ACGIH STEL 500 ppm (1,230 mg/m³)

PEL= Permissible Exposure Limits
 TLV= Threshold Limit Value
 EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)
 STEL= Short Term Exposure Limit (15 min.)
 WEEL= Workplace Environmental Exposure Level

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid

Colour Colorless

Odour Aromatic. Pleasant resembling a mixture of ethanol and acetone. (slight)

Form liquid

Boiling point/range 82.22 °C 180 °F

Vapour pressure 33 mm Hg @ 20 °C

Vapor density 2.08

Solubility (water) completely soluble

Viscosity 3.03 cSt

Melting point/range -88.5 °C -127.3 °F

Density 0.79 g/cm³

pH 7

Evaporation rate 2.88

SECTION 10 STABILITY AND REACTIVITY

Conditions to avoid Keep away from heat and sources of ignition.

Hazardous decomposition products Combustion products include carbon dioxide, carbon monoxide and possibly other unidentified organic compounds.

Isopropyl Alcohol

Incompatability with other materials	Can react with strong oxidizers, inorganic acids, and halogens.
Hazardous polymerization	None.

SECTION 11 TOXICOLOGICAL INFORMATION

Additional Remarks Exposure can cause nausea, headache and vomiting. May be harmful by inhalation, ingestion, skin adsorption.

Eyes Irritating to eyes.

Skin .
Acute dermal LD50 (rabbit): 12,800 mg/kg

Inhalation Acute 4 hours LC50 (rat): 16,970 mg/l

Ingestion Acute oral LD50(rat): 5,045 mg/kg

CARCINOGENICITY

This product contains no carcinogenic substances.

SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity Low toxicity to aquatic organisms such as bacteria, algae, protozoa and fish.

LC50 (Leuciscus idus melanotus) 48 hours > 100

LC50 (Brown shrimp) 96 hours 467,923 mg/l

EC50 (Brine shrimp) 48 hours > 100 mg/l

EC50 (S. subspicatus (algae)): 72 hours > 100 mg/l

Isopropyl Alcohol

Biodegradation Readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste code D001 - Ignitability (RQ 100 LB) This product has the RCRA characteristic of ignitability. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification.

Disposal methods Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Empty containers Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

SECTION 14 TRANSPORT INFORMATION

DOT description Isopropanol, 3, UN 1219, II This product is regulated as a hazardous material as defined by the Department of Transportation (DOT).

IATA description Isopropanol, 3, UN 1219, II This product is regulated as a dangerous good as defined by ICAO/IATA for air transportation.

IMDG description Isopropanol 3, UN 1219, II This product is regulated as a dangerous good as defined by the IMDG Code for marine transport.

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

OSHA classification
Flammable liquid and eye irritant

TSCA Inventory Listing

Components

2-Propanol

CAS-No.

67-63-0

Isopropyl Alcohol

SARA 302 Status Components

CAS-No.

Weight %

Contains no chemicals subject to SARA 302 reporting.

SARA 311/312 Classification

"Fire hazard", "Immediate (acute) health hazard"

SARA 313 Chemical Components

CAS-No.

Weight %

2-Propanol

67-63-0

100

CERCLA Hazardous Substance Components

CERCLA RQ

Weight %

Contains no chemicals subject to CERCLA.

INTERNATIONAL REGULATIONS

Workplace Hazardous Materials Information System (WHMIS) Classification

Class B, Division 2: Flammable liquid.

Class D, Division 2, Subdivision A: Very toxic material

Class D, Division 2, Subdivision B: Toxic material.

Australian Inventory of Chemical Substances (AICS) Listing

Listed on the AICS.

Japanese Minister of International Trade and Industry (MITI) Inventory Listing

Listed on MITI.

Canadian Domestic Substance List (DSL) Inventory Listing

Listed on the DSL.

European Inventory of Existing Commercial Chemical Substances (EINECS) Listing

Listed on EINECS.

Phillipines Inventory List (PICCS)

Listed on PICCS.

Korean Inventory List

Listed on the ECL.

China Inventory List

Listed on the China inventory.

Isopropyl Alcohol

STATE REGULATIONS

California Safe Drinking Water Act (Prop 65) Listing
Components

CAS-No.

Contains no chemical subject to California Prop 65.

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

	<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
HMIS	1	3	0
NFPA	1	3	0

THE DATA AND INFORMATION CONTAINED HEREIN ARE BEING FURNISHED FOR INFORMATIONAL PURPOSES ONLY, UPON THE EXPRESS CONDITION THAT EACH CUSTOMER SHALL MAKE ITS OWN ASSESSMENT OF APPROPRIATE USE AND APPROPRIATE SHIPPING, TRANSFER AND STORAGE MATERIALS AND PROCEDURES FOR SASOL NORTH AMERICA'S PRODUCTS. ALTHOUGH BASED ON INFORMATION SOURCES WHICH SASOL NORTH AMERICA CONSIDERS ACCURATE AND RELIABLE, SASOL NORTH AMERICA MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDING THE VALIDITY OF THIS INFORMATION, THE INFORMATION SOURCES UPON WHICH THE SAME ARE BASED, OR THE RESULTS TO BE OBTAINED, AND EXPRESSLY DISCLAIMS LIABILITIES FOR DAMAGES OR INJURIES RESULTING FROM THE USE THEREOF.