

# SAFETY DATA SHEET

## 1 PRODUCT AND COMPANY IDENTIFICATION

**GHS Product identifier:** 2-Propanol

**Other means of identification**

**Synonyms:** Isopropyl alcohol

**Product No.:** 3412, 5373, 5863, 5873, 5892, 5967, 5977, 5978, 5979, 5986, 7065, 8067, 8119, 8235, 9045, 9055, 9059, 9078, 9079, 9082, 9083, 9084, 9088, 9095, 9334, 9827, 9921

**Recommended use:** For Laboratory, Research or Manufacturing Use.

**Limitations on use:** Not determined.

**Details of the supplier of the safety data sheet:**

Avantor Performance Materials, LLC  
100 Matsonford Rd, Suite 200  
Radnor, PA 19087

**Telephone:**

Customer Service: 855-282-6867

**Contact Person:** Product Information Compliance

**E-mail:** info@avantormaterials.com

**Emergency telephone:** CHEMTREC: 800-101-

2201 (24/7)

## 2 HAZARDS IDENTIFICATION

**GHS classification:**

**Physical Hazards:**

Flammable liquids Category 2

**Health Hazards:**

Serious Eye Damage/Eye Irritation Category 2

Specific Target Organ Toxicity - Single Exposure Category 3(Narcotic effect.)

Aspiration Hazard Category 2

**GHS label elements:**

**Symbol(s):**



**Signal Words:** Danger

**Hazard Statement(s):** Highly flammable liquid and vapor.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
May be harmful if swallowed and enters airways.

**Precautionary Statements**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting] equipment. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.

**Response:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If eye irritation persists: Get medical advice/attention. In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in classification':**

**Primary hazards:** Flammable liquid and vapor.

**Specific hazards:** No data available.

**3 COMPOSITION / INFORMATION ON INGREDIENTS**
**Substance or Preparation:**
**General information:**

Chemical name	Concentration	CAS-No.	EC No.
Isopropyl alcohol	98 - 100%	67-63-0	

**4 FIRST AID MEASURES**

**General:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**Inhalation:** Move to fresh air. Get medical attention if symptoms persist.

**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 skin thoroughly with soap and water. Get medical attention if symptoms occur. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.

**Ingestion** Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Most important symptoms/effects, acute delayed:** Harmful if swallowed. Narcotic effect. Irritating to eyes, respiratory system and skin.

**Indication of immediate medical attention and special treatment needed, if necessary:** Treat symptomatically. Symptoms may be delayed.

## 5 FIRE-FIGHTING MEASURES

**Extinguishing media:** Water spray, foam, dry powder or carbon dioxide.

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazard arising from the chemical:** Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Vapor from the solvent may accumulate in container headspace resulting in flammability hazard. Heat may cause the containers to explode.

**Special fire fighting procedures:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

**Special protective action for fire fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## 6 ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid breathing mists or vapors. Ventilate closed spaces before entering them. See Section 8 of the SDS for Personal Protective Equipment.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up:** In case of leakage, eliminate all ignition sources. Use non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures:** Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

## 7 HANDLING AND STORAGE

**Precautions for safe handling:** Do not handle until all safety precautions have been read and understood. 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. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting] equipment. Use non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Use only with adequate ventilation. Do not breathe mist or vapor.

**Condition for safe storage, including any incompatibilities:** Keep away from food, drink and animal feeding stuffs. 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 / PERSONAL PROTECTION**

**Appropriated engineering control measures:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof ventilation equipment.

**Occupational Exposure Limits:**

Chemical name	Type	Exposure Limit Values	Source
Isopropyl alcohol	STEL	500 ppm      1,230 mg/m3	Singapore. PELs. (Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order) (2006)
	TWA	400 ppm      983 mg/m3	Singapore. PELs. (Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order) (2006)

**Personal protective equipment (ppe)**

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge.

**Eye Protection:** Wear safety glasses with side shields (or goggles).

**Hand Protection:** No data available.

**Skin Protection:** Wear suitable protective clothing.

**Hygiene measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.

**9 PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**

**Physical state:** Liquid  
**Form:** Liquid  
**Color:** Colorless  
**Odor:** Alcohol  
**Odor Threshold:** No data available.  
**pH:** No data available.  
**Freezing point:** -88.5 °C  
**Boiling Point:** 82.3 - 82.5 °C  
**Flash Point:** 12 °C (Closed Cup)  
**Evaporation Rate:** 21 (ether=1)2.9 (n-butyl acetate=1)  
**Flammability (solid, gas):** Class IB Flammable Liquid

<b>Flammability Limit - Upper (%)-:</b>	12 %(V)
<b>Flammability Limit - Lower (%)-:</b>	2.5 %(V)
<b>Vapor pressure:</b>	6.053 kPa (25 °C) 44 hPa (20 °C)
<b>Vapor density (air=1):</b>	2.1 (Air=1)
<b>Relative density:</b>	0.79 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	Miscible
<b>Solubility (other):</b>	benzene: Soluble chloroform: Miscible
<b>Partition coefficient (n-octanol/water):</b>	0.05
<b>Autoignition Temperature:</b>	399 °C
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	2.4 mm <sup>2</sup> /s (20 °C)
<b>Explosive properties:</b>	No data available.
<b>Oxidizing properties:</b>	No data available.
<b>Other information</b>	
<b>Molecular weight:</b>	60.10 g/mol (C <sub>3</sub> H <sub>8</sub> O; CH <sub>3</sub> CH(OH)CH <sub>3</sub> )
<b>Minimum ignition energy:</b>	0.65 mJ

## 10 STABILITY AND REACTIVITY

<b>Incompatible Materials:</b>	Strong oxidizing agents. Acids. Isocyanates. Hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ) Sulfuric acid. Acetaldehyde. Acetylene. Chlorine. Aluminum. Ethylene Oxide
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames. Sunlight.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition may release oxides of carbon.

## 11 TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Inhalation:</b>	May cause irritation to the mucous membranes and upper respiratory tract. May cause central nervous system effects.
<b>Ingestion:</b>	Irritating. May cause nausea, stomach pain and vomiting.
<b>Skin Contact:</b>	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
<b>Eye contact:</b>	Causes serious eye irritation.

### Information on toxicological effects

#### Acute toxicity

<b>Oral</b>	
<b>Product:</b>	LD 50 (Rat): 5,045 - 5,840 mg/kg
<b>Dermal</b>	
<b>Product:</b>	LD 50 (Rabbit): 12,800 mg/kg

<b>Inhalation</b>	
Product:	LC 50 (Rat, 6 h): > 10000 ppm LOAEL (Rat, 6 h): 5000 ppm
<b>Repeated dose toxicity</b>	
Product:	No data available.
<b>Skin Corrosion/Irritation:</b>	
Product:	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
<b>Serious Eye Damage/Eye Irritation:</b>	
Product:	Causes serious eye irritation.
<b>Respiratory or Skin Sensitization:</b>	
Product:	Not a skin nor a respiratory sensitizer.
<b>Germ Cell Mutagenicity</b>	
<b>In vitro</b>	
Product:	No mutagenic components identified
<b>In vivo</b>	
Product:	No mutagenic components identified
<b>Carcinogenicity</b>	
Product:	This substance has no evidence of carcinogenic properties.
<b>Reproductive toxicity</b>	
Product:	No components toxic to reproduction
<b>Specific Target Organ Toxicity - Single Exposure</b>	
Product:	Central nervous system. - Narcotic effect.
<b>Specific Target Organ Toxicity - Repeated Exposure</b>	
Product:	None known.
<b>Aspiration Hazard</b>	
Product:	No data available.
<b>Specified substance(s)</b>	
Isopropyl alcohol	No data available.
<b>Metabolism:</b>	No data available.
<b>Other effects:</b>	None known.

<b>12 ECOLOGICAL INFORMATION</b>
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<b>General information:</b>	Not applicable
<b>Ecotoxicity</b>	
<b>Acute toxicity</b>	
<b>Fish</b>	
Product:	LC 50 (Western mosquitofish (Gambusia affinis), 96 h): > 1,400 mg/l
<b>Aquatic Invertebrates</b>	
Product:	LC 50 (Water flea (Daphnia magna), 24 h): 10,000 mg/l
<b>Chronic Toxicity</b>	
<b>Fish</b>	
Product:	No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** Expected to be readily biodegradable.

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Product:** No data available on bioaccumulation.

**Mobility in soil:**

The product is partly soluble in water. May spread in the aquatic environment.

**Results of PBT and vPvB assessment:**

Not available.

**Other adverse 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.

**13 Disposal considerations**

**Disposal methods:**

Discharge, treatment, or disposal may be subject to national, state, or local laws.

**14 TRANSPORT INFORMATION**

**IMDG - International Maritime Dangerous Goods Code**

UN Number:	UN 1219
UN Proper Shipping Name:	ISOPROPANOL
Transport Hazard Class(es):	3
Subsidiary risk label(s):	–
Packing Group:	II
Label(s):	3
Marine Pollutant:	Not a Marine Pollutant
EmS No.:	F-E; S-D

**IATA**

UN Number:	UN 1219
Proper Shipping Name:	Isopropanol
Transport Hazard Class(es):	3
Subsidiary risk label(s):	–
Packing Group:	II
Label(s):	3
Marine Pollutant	Not a Marine Pollutant

**15 REGULATORY INFORMATION**

**Applicable regulations:**

Workplace Safety and Health Act  
 Act on the Control of Transboundary Movements of Hazardous Wastes and their Disposal  
 Environmental Public Health Act  
 Environmental Public Health (Toxic Industrial Waste) Regulations  
 Singapore. Hazardous Substances Control List (Environmental Protection and Management Act, Second

Schedule, Part 1, Control of Hazardous Substances)  
Environmental Pollution Control (Hazardous Substances) Regulations  
Singapore. PELs. (Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order)

## 16 OTHER INFORMATION

### Inventory Status

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

**Revision Information:** Not relevant.

**Issue Date:** 03-01-2021

**SDS No.:**

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