

# SAFETY DATA SHEET

## 1 PRODUCT AND COMPANY IDENTIFICATION

**Product name:** 2-Propanol

**Product No.:** 9079-69, 9079-05, 9079-16, 9079-03, 9079-14, 9079-18

**Manufacturer:**

Avantor Performance Materials, Inc.  
3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034  
U.S.A.

**Telephone:**

Customer Service: 855-282-6867

**Contact Person:** Environmental Health & Safety

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

**Emergency telephone:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2 HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:**

**Color:**

Colorless

**Form :**

Liquid

**Odor:**

Odor of rubbing alcohol

**Signal words**

WARNING!

**Potential Health Effects:**

**General**

Causes eye irritation. Harmful if swallowed. 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 Physical / Chemical Effects:**

Flammable liquid and vapor.

**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.

**Skin:**

Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

**Eye:**

Causes eye irritation. High vapor concentrations may cause irritation.

**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.

**Chronic Effects:**

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

**Routes of Exposure:**

Skin and/or eye contact., Inhalation, Ingestion

**Target Organs:**

Central nervous system

**OSHA Regulatory Status** This product is hazardous according to OSHA 29CFR 1910.1200.

**Environment:** 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

**General information:**

**Hazardous Component(s):**

Chemical name	CAS-No.	Concentration
ISOPROPYL ALCOHOL	67-63-0	98 - 100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 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.

**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.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

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

**Notes to the physician:**  
**Treatment:** 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.

**Unusual Fire & Explosion Hazards:** 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.

**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.

**Protective Measures:** 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:** Use personal protective equipment. Keep unauthorized personnel away. Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Environmental precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.
- Spill Cleanup Methods:** Eliminate all ignition sources if safe to do so. Dike far ahead of larger spill for later recovery and disposal. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.
- Notification Procedures:** Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

## 7 HANDLING AND STORAGE

- Handling:** Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. 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. Use personal protective equipment as required. Avoid breathing high vapor concentrations. Avoid contact with eyes and prolonged or repeated contact with skin. Do not taste or swallow. Use only with adequate ventilation. Wash hands thoroughly after handling. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. See Section 8 of the MSDS for Personal Protective Equipment.
- Storage:** Keep away from food, drink and animal feedingstuffs. Keep container tightly closed. Keep 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

### Exposure limits

Chemical name	Type	Exposure Limit values	Source
ISOPROPYL ALCOHOL	TWA	200 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	400 ppm	US. ACGIH Threshold Limit Values (2011)
ISOPROPYL ALCOHOL	PEL	400 ppm      980 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	400 ppm      980 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	500 ppm      1,225 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

### Biological limit values

Chemical name	Exposure Limit values	Source
ISOPROPYL ALCOHOL (acetone: Sampling time: End of shift at end of work week.)	40 mg/l (Urine)	ACGIH BEL (2011)

#### Protective 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. Use explosion-proof ventilation equipment.

#### Respiratory Protection:

In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.

#### Eye protection:

Wear safety glasses with side shields (or goggles).

#### Skin and Body Protection:

Wear suitable protective clothing and gloves.

#### Hygiene measures:

Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. Do not eat, drink or smoke when using the product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

<b>Physical State:</b>	Liquid
<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Odor of rubbing alcohol
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Freezing point:</b>	-88.5 °C
<b>Boiling Point:</b>	82.5 °C (101.325 kPa)
<b>Flash Point:</b>	12 °C (Closed Cup)

<b>Evaporation Rate:</b>	2.8 n-butyl acetate=1
<b>Flammability (solid, gas):</b>	Class IB Flammable Liquid
<b>Flammability Limit - Upper (%)-:</b>	12.7 %(V)
<b>Flammability Limit - Lower (%)-:</b>	2 %(V)
<b>Vapor pressure:</b>	6.053 kPa (25 °C)
<b>Vapor density (air=1):</b>	2.1 AIR=1
<b>Relative density:</b>	0.7850 (20 °C) 4 °C
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	Miscible with water.
<b>Solubility (other):</b>	No data available.
<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>	No data available.
<b>Explosive properties:</b>	No data available.
<b>Oxidizing properties:</b>	No data available.

## 10 STABILITY AND REACTIVITY

<b>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>Incompatible materials:</b>	Strong oxidizing agents. Acetylene. Acids. Chlorine. Hydrogen peroxide (H2O2) Ethylene Oxide Sulfuric acid. Isocyanates. Aluminum.
<b>Hazardous decomposition products:</b>	Thermal decomposition may release oxides of carbon.

## 11 TOXICOLOGICAL INFORMATION

<b>Product:</b>	
<b>Acute Toxicity (Oral):</b>	LD 50 (Rat): 5,045 mg/kg
<b>Acute Toxicity (Dermal):</b>	LD 50 (Rabbit): 12,800 mg/kg
<b>Inhalation:</b>	May cause irritation to the mucous membranes and upper respiratory tract.
<b>Ingestion:</b>	Irritating. May cause nausea, stomach pain and vomiting.
<b>Skin corrosion/irritation:</b>	Causes mild skin irritation.
<b>Serious eye damage/eye irritation:</b>	Causes serious eye irritation.
<b>Respiratory sensitizer/Skin sensitizer:</b>	Not a skin sensitizer.
<b>Carcinogenicity:</b>	This substance has no evidence of carcinogenic properties.

<b>Mutagenesis:</b>	No mutagenic components identified
<b>Reproductive toxicity:</b>	No components toxic to reproduction
<b>Other Effects:</b>	None known.

## 12 ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	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.
<b>Product:</b>	
<b>Acute toxicity(Fish):</b>	LC 50 (Western mosquitofish ( <i>Gambusia affinis</i> ), 96 h): > 1,400 mg/l
<b>Chronic Toxicity(Fish):</b>	No data available.
<b>Acute toxicity(Aquatic invertebrates):</b>	LC 50 (Water flea ( <i>Daphnia magna</i> ), 24 h): 10,000 mg/l
<b>Chronic Toxicity(Aquatic invertebrates):</b>	No data available.
<b>Acute toxicity(Aquatic plants):</b>	No data available.
<b>Persistence and degradability:</b>	Expected to be readily biodegradable.
<b>Bioaccumulative potential:</b>	No data available on bioaccumulation.
<b>Mobility:</b>	The product is partly soluble in water. May spread in the aquatic environment.

## 13 DISPOSAL CONSIDERATIONS

<b>Disposal Methods:</b>	Discharge, treatment, or disposal may be subject to national, state, or local laws.  Since emptied containers retain product residue, follow label warnings even after container is emptied.
--------------------------	--

## 14 TRANSPORT INFORMATION

### DOT

UN number: UN 1219  
 Proper Shipping Name: Isopropanol  
 Transport hazard class(es): 3  
 Subsidiary risk label: –  
 Packing group: II  
 Label(s): 3  
 Marine Pollutant

### IMDG - International Maritime Dangerous Goods Code

UN number: UN 1219  
 UN proper shipping name: ISOPROPANOL  
 Transport hazard class(es): 3  
 Subsidiary risk label: –  
 Packing group: II  
 Label(s): 3  
 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: –  
 Packing group: II  
 Label(s): 3

## 15 REGULATORY INFORMATION

### Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
EU ELINCS List:	Not in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory
EU No Longer Polymers List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Switzerland Consolidated Inventory:	Not in compliance with the inventory.
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

### US Regulations

- **CERCLA Hazardous Substance List (40 CFR 302.4):**
- **Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):**  
None
- **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**  
None

**SARA Title III**

• **Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):**

None  
None

• **Section 311/312 (40 CFR 370):**

Acute (Immediate)    Chronic (Delayed)    Fire    Reactive    Pressure Generating

• **Section 313 Toxic Release Inventory (40 CFR 372):**

Chemical name	CAS-No.	Reporting threshold for other users	Reporting threshold for manufacturing and processing
ISOPROPYL ALCOHOL	67-63-0	10000 lbs	25000 lbs.

**State Regulations**

• **California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):**

• **Massachusetts Right-To-Know List:**

ISOPROPYL ALCOHOL   Listed

• **New Jersey Right-To-Know List:**

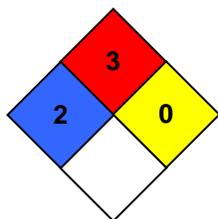
ISOPROPYL ALCOHOL   Listed

• **Pennsylvania Right-To-Know List:**

ISOPROPYL ALCOHOL   Listed

**16 OTHER INFORMATION**

**NFPA Hazard ID**



Flammability  
 Health  
 Reactivity  
 Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

**Revision Information:**

**Issue Date:** 01-09-2013

**SDS No:**

**Disclaimer:**

THE INFORMATION PRESENTED IN THIS MATERIAL SAFETY DATA SHEET (MSDS/SDS) WAS PREPARED BY TECHNICAL PERSONNEL BASED ON DATA THAT THEY BELIEVE IN THEIR GOOD FAITH JUDGMENT IS ACCURATE. HOWEVER, THE INFORMATION PROVIDED HEREIN IS PROVIDED "AS IS," AND AVANTOR PERFORMANCE MATERIALS MAKES AND GIVES NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, AND EXPRESSLY DISCLAIMS ALL WARRANTIES REGARDING SUCH INFORMATION AND THE PRODUCT TO WHICH IT RELATES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING WITHOUT LIMITATION, WARRANTIES OF ACCURACY, COMPLETENESS, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY, STABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE. THIS MSDS/SDS IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE

PRECAUTIONARY HANDLING OF THE MATERIAL BY A PROPERLY TRAINED PERSON USING THIS PRODUCT, AND IS NOT INTENDED TO BE COMPREHENSIVE AS TO THE MANNER AND CONDITIONS OF USE, HANDLING, STORAGE, OR DISPOSAL OF THE PRODUCT. INDIVIDUALS RECEIVING THIS MSDS/SDS MUST ALWAYS EXERCISE THEIR OWN INDEPENDENT JUDGMENT IN DETERMINING THE APPROPRIATENESS OF SUCH ISSUES. ACCORDINGLY, AVANTOR PERFORMANCE MATERIALS ASSUMES NO LIABILITY WHATSOEVER FOR THE USE OF OR RELIANCE UPON THIS INFORMATION. NO SUGGESTIONS FOR USE ARE INTENDED AS, AND NOTHING HEREIN SHALL BE CONSTRUED AS, A RECOMMENDATION TO INFRINGE ANY EXISTING PATENTS OR TO VIOLATE ANY FEDERAL, STATE, LOCAL, OR FOREIGN LAWS. AVANTOR PERFORMANCE MATERIALS REMINDS YOU THAT IT IS YOUR LEGAL DUTY TO MAKE ALL INFORMATION IN THIS MSDS/SDS AVAILABLE TO YOUR EMPLOYEES.