

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended 2015/830.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: 2-Propanol
Product No. 3412, 8067, 8119, 8235, 9095, 8468, 5863, 6775, 3043, 7065, 5873, 5967

Additional identification

Chemical name: Isopropyl alcohol
Chemical formula: C₃H₈O
INDEX No. 603-117-00-0
CAS-No. 67-63-0
EC No. 200-661-7
REACH Registration No. 01-2119457558-25-XXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: For Laboratory, Research or Manufacturing Use.
Uses advised against: Not determined.

1.3 Details of the supplier of the safety data sheet

Avantor Performance Materials Poland S.A.
Sowinskiego 11str., 44-101 Gliwice,
Poland

Telephone: 48 32 239-20-00
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Contact person: Product Information Compliance
E-mail: export@avantormaterials.com

E-mail address of person responsible for this SDS: SDS@avantormaterials.com

1.4 Emergency telephone number: CHEMTREC: (44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Physical Hazards

Flammable liquids Category 2 H225: Highly flammable liquid and vapour.

Health Hazards

Serious eye irritation Category 2 H319: Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure Category 3 H336: May cause drowsiness or dizziness.

2.2 Label Elements

Contains: Isopropyl alcohol



Signal Word: Danger

Hazard Statement(s): H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Target organs:
Isopropyl alcohol narcotic effects

Precautionary Statements

Prevention: P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTRE/doctor if you feel unwell.
P337+P313: If eye irritation persists: Get medical advice/attention.

Storage: P403+P233: Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Isopropyl alcohol	50 - <100%	67-63-0	200-661-7	01-2119457558-25-XXXX	No data available.	#

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

This substance has workplace exposure limit(s).

SECTION 4: First Aid Measures

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

4.1 Description of first aid measures

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 re-use.
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 doctor or poison control centre immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
4.2 Most important symptoms and effects, both acute and delayed:	Harmful if swallowed. Narcotic effect. Irritating to eyes, respiratory system and skin.
4.3 Indication of any immediate medical attention and special treatment needed	
Hazards:	No data available.
Treatment:	Treat symptomatically. Symptoms may be delayed.

SECTION 5: Firefighting Measures

General Fire Hazards:	Flammable liquid and vapour.
5.1 Extinguishing media Suitable extinguishing media:	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
5.2 Special hazards arising from the substance or mixture:	Vapours may cause a flash fire or ignite explosively. Vapours may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapours or gases to explosive concentrations. Vapour from the solvent may accumulate in container headspace resulting in flammability hazard. Heat may cause the containers to explode.
5.3 Advice for firefighters 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 equipment for firefighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorised 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 vapours. Ventilate closed spaces before entering them. See Section 8 of the SDS for Personal Protective Equipment.
6.2 Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

6.3 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. Dyke far ahead of larger spill for later recovery and disposal.

6.4 Reference to other sections:

No data available.

SECTION 7: Handling and Storage:
7.1 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 vapour.

7.2 Conditions 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.

7.3 Specific end use(s):

No data available.

SECTION 8: Exposure Controls/Personal Protection
8.1 Control Parameters
Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Isopropyl alcohol	NDSch	1.200 mg/m ³	<** Phrase language not available: [6N] CUST - ARI005000000812 **> (07 2010)
	NDS	900 mg/m ³	<** Phrase language not available: [6N] CUST - ARI005000000812 **> (07 2010)

DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
Isopropyl alcohol	General population	Oral	Systemic, long-term; 500 mg/m ³ 26 mg/kg bw/day	Repeated dose toxicity

PNEC-Values

Critical component	Environmental compartment	PNEC-Values
Isopropyl alcohol	Sediment (freshwater)	552 mg/kg
	Aquatic (freshwater)	140,9 mg/l
	Aquatic (marine water)	140,9 mg/l
	Soil	28 mg/kg
	Sediment (marine water)	552 mg/kg
	Predator	160 mg/kg

8.2 Exposure controls
Appropriate Engineering Controls:

No special requirements under ordinary conditions of use and with adequate ventilation.

Individual protection measures, such as personal protective equipment

General information:	Use explosion-proof ventilation equipment. 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. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Eye/face protection:	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand Protection:	Material: Chemical resistant gloves
Other:	Wear suitable protective clothing.
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 vapour cartridge.
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.
Environmental Controls:	No data available.

SECTION 9: Physical And Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	Liquid
Form:	Liquid
Colour:	Colorless
Odour:	Alcohol
Odour Threshold:	No data available.
pH:	No data available.
Freezing point:	-88,5 °C
Boiling Point:	82,5 °C (101,3 kPa)
Flash Point:	12 °C (Closed Cup)
Evaporation Rate:	21 (ether=1) 1,7 (n-butyl acetate=1)
Flammability (solid, gas):	Class IB Flammable Liquid
Flammability limit - upper (%)	12 %(V)
Flammability limit - lower (%)	2,5 %(V)
Vapour pressure:	6,053 kPa (25 °C) 44 hPa (20 °C)
Vapour density (air=1):	2,1 Air=1
Density:	0,79 g/ml (20 °C)
Relative density:	0,79 (20 °C)
Solubility(ies)	
Solubility in Water:	Miscible

Solubility (other):	benzene: soluble chloroform: Miscible
Partition coefficient (n-octanol/water):	0,05
Autoignition Temperature:	399 °C
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidising Properties:	No data available.

9.2 Other information

Molecular weight:	60,1 g/mol (C3H8O)
VOC content:	EC Directive 2004/42: 790 g/l ~100 % (calculated)
Minimum ignition energy:	0,65 mJ

SECTION 10: Stability and Reactivity

10.1 Reactivity:	No data available.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
10.4 Conditions to Avoid:	Heat, sparks, flames. Sunlight.
10.5 Incompatible Materials:	Strong oxidising agents. Acids. Isocyanates Hydrogen peroxide (H2O2) Sulfuric acid. Acetaldehyde Acetylene. Chlorine. Aluminium. Ethylene Oxide
10.6 Hazardous Decomposition Products:	Thermal decomposition may release oxides of carbon.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation:	None known or expected under normal use.
Skin Contact:	None known or expected under normal use.
Eye contact:	Causes serious eye irritation.
Ingestion:	No adverse effects due to ingestion are expected.

11.1 Information on toxicological effects

Acute toxicity

Oral Product:	LD 50 (Rat): 5.045 - 5.840 mg/kg
Dermal Product:	LD 50 (Rabbit) 12.800 mg/kg
Inhalation Product:	LC 50 (Rat, 6 h): > 10000 ppm LOAEL (Rat, 6 h): 5000 ppm

Repeated dose toxicity	
Product:	No data available.
Skin Corrosion/Irritation:	
Product:	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Serious Eye Damage/Eye Irritation:	
Product:	Causes serious eye irritation.
Respiratory or Skin Sensitisation:	
Product:	Not a skin nor a respiratory sensitizer.
Germ Cell Mutagenicity	
In vitro	
Product:	No mutagenic components identified
In vivo	
Product:	No mutagenic components identified
Carcinogenicity	
Product:	This substance has no evidence of carcinogenic properties.
Reproductive toxicity	
Product:	No components toxic to reproduction
Specific Target Organ Toxicity - Single Exposure	
Product:	No data available.
Specific Target Organ Toxicity - Repeated Exposure	
Product:	None known.
Target organs:	
Isopropyl alcohol	narcotic effects
Aspiration Hazard	
Product:	Not classified
Other Adverse Effects:	None known.

SECTION 12: Ecological Information

12.1 Toxicity

Acute toxicity

Fish

Product: LC 50 (Western mosquitofish (*Gambusia affinis*), 96 h): > 1.400 mg/l

Specified substance(s)

Isopropyl alcohol
 LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 5.770 - 11.130 mg/l
 LC 50 (Harlequinfish, red rasbora (*Rasbora heteromorpha*), 96 h): 4.200 mg/l
 LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): > 1.400 mg/l
 LC 50 (Western mosquitofish (*Gambusia affinis*), 96 h): > 1.400 mg/l

Aquatic Invertebrates

Product: LC 50 (Water flea (*Daphnia magna*), 24 h): 10.000 mg/l

Specified substance(s)
Isopropyl alcohol EC 50 (Daphnia magna, 24 h): 9.714 mg/l
LC 50 (Common shrimp, sand shrimp (Crangon crangon), 48 h): 900 - 1.950 mg/l

Chronic toxicity

Fish

Product: No data available.

Specified substance(s)
Isopropyl alcohol No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s)
Isopropyl alcohol No data available.

Toxicity to aquatic plants

Product: No data available.

Specified substance(s)
Isopropyl alcohol No data available.

12.2 Persistence and Degradability

Biodegradation

Product: Expected to be readily biodegradable.

Specified substance(s)
Isopropyl alcohol No data available.

BOD/COD Ratio

Product No data available.

Specified substance(s)
Isopropyl alcohol No data available.

12.3 Bioaccumulative Potential

Product: No data available on bioaccumulation.

Specified substance(s)
Isopropyl alcohol No data available.

12.4 Mobility in Soil:

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

Known or predicted distribution to environmental compartments

Isopropyl alcohol No data available.

12.5 Results of PBT and vPvB assessment:

Not available.

Isopropyl alcohol No data available.

12.6 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.

12.7 Additional Information:

No data available.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

General information: No data available.

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

SECTION 14: Transport Information

ADR

14.1 UN Number: UN 1219
 14.2 UN Proper Shipping Name: ISOPROPANOL
 14.3 Transport Hazard Class(es)
 Class: 3
 Label(s): 3
 Hazard No. (ADR): 33
 Tunnel restriction code: (D/E)
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

RID

14.1 UN Number: UN 1219
 14.2 UN Proper Shipping Name: ISOPROPANOL
 14.3 Transport Hazard Class(es)
 Class: 3
 Label(s): 3
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

IMDG

14.1 UN Number: UN 1219
 14.2 UN Proper Shipping Name: ISOPROPANOL
 14.3 Transport Hazard Class(es)
 Class: 3
 Label(s): 3
 EmS No.: F-E, S-D
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

IATA

14.1 UN Number: UN 1219
 14.2 Proper Shipping Name: Isopropanol
 14.3 Transport Hazard Class(es):
 Class: 3
 Label(s): 3
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 689/2008 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006 REACH Annex XIV Substance subject to authorisation, as amended: none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

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

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

Directive 2012/18/EU (Seveso III): on the control of major accident hazards involving dangerous substances:

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

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

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

National Regulations

Regulation (EC) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation of the Minister of Economy and Labour social dated 31 March 2003. on essential requirements for personal protective equipment (Dz.U.03.80.725) of the amended Regulation of the Minister of Economy, Labour and social Policy of 21 December 2005 on essential requirements for personal protective equipment (Dz.U.05.259.2173)
Regulation of the Minister of the Environment of 9 December 2014. on waste (OJ 2014 pos. 1923)
Regulation of the Minister of Labour and Social Policy of 6 June 2014. on maximum allowable concentrations and intensity of harmful factors in the work environment (OJ 2014 pos. 817), as amended
Regulation of the Minister of health on 2 February 2011. on tests and measurements of health hazard factors in the work environment (Dz.U.2011 pos. 166)
Ordinance of the Minister of Health of 30 December 2004. On occupational health and safety relating the presence of chemical agents (Dz.U.05.11.86), as amended.
Regulation of the Minister of Health of 20 April 2012. On the labeling of chemical substances and mixtures, and certain mixtures (OJ 2012 pos. 445)
The Act of 14 December 2012. On waste. (OJ 2013 pos. 21)
The Act of 13 June 2013. On packaging and packaging waste (OJ 2013 pos. 888)
The Act of 25 February 2011. On chemical substances and their mixtures (Journal .u. 2011 No. 63, item. 322)

15.2 Chemical safety assessment:

No Chemical Safety Assessment has been carried out.

SECTION 16: Other Information

Revision Information:

Not relevant.

References

PBT
vPvB

PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

Key literature references and sources for data:

Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.

Wording of the H-statements in sections 2 and 3

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Training information:

No data available.

**Issue Date:
SDS No.:**

27.08.2019

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