Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1 Product identifier

Trade name/designation:	2-Propanol ACS
Product No.:	8067
Index No.:	603-117-00-0
CAS No.:	67-63-0
EU REACH No.:	01-2119457558-25-XXXX
Other means of identification:	2-Hydroxy propane, Dimethyl carbinol, IPA, Isopropanol, Isopropyl alcohol

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

Relevant identified uses	For Laboratory, Research or Manufacturing Use.

1.3 Details of the supplier of the safety data sheet

Supplier

Avantor Performance Materials Poland S.A.

Street	Sowinskiego 11str.
Postal code/City	44-101 Gliwice
Telephone	48 32 239-20-00
Telefax	48 32 239-23-70
E-mail (competent person)	SDS@avantorsciences.com

Distributor

VWR International Ltd.

Street	Orion Business Campus, Northwest Business Park
Postal code/City	Ballycoolin, Dublin 15

1.4 Emergency phone number

Telephone	+44 (0) 1270 502894 (CareChem24)

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Physical hazards

Flammable liquid, category 2	H225 - Highly flammable liquid and vapour.

Health hazards

Eye irritation, category 2	H319 - Causes serious eye irritation.
Specific target organ toxicity (single exposure), category 3, narcotic effect	H336 - May cause drowsiness or dizziness.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

Signal word: Danger

Hazard statements

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

Precautionary statements

Prevention:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

SECTION 3: Composition / information on ingredients

Substances

Substance name:	2-Propanol
Molecular formula:	$CH_3CHOHCH_3$
Molecular weight:	60.1 g/mol
CAS No.:	67-63-0

EU REACH registration No.:	01-2119457558-25-XXXX
EC No.	200-661-7
ATE, SCL and/or M-factor:	none

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice. Change contaminated, saturated clothing. Wash contaminated clothing before reuse. Do not leave affected person unattended.

After inhalation

Remove casualty to fresh air and keep warm and at rest. Obtain medical attention if symptoms appear.

In case of skin contact

Gently wash with plenty of soap and water. In case of skin reactions, consult a physician.

After eye contact

Rinse immediately carefully and thoroughly with eye-bath or water. Obtain medical attention if symptoms appear.

In case of ingestion

Rinse mouth thoroughly with water. Call a doctor if you feel unwell.

Self-protection of the first aider

First aider: Pay attention to self-protection!

4.2 Most important symptoms and effects, both acute and delayed

Irritation. Vomiting. Nausea. Dizziness. Drowsiness.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a POISON CENTRE/doctor. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray.
ABC-powder
Carbon dioxide (CO_2).
Nitrogen

Extinguishing media which must not be used for safety reasons

Full water jet.

5.2 Special hazards arising from the substance or mixture

Move undamaged containers from immediate hazard area if it can be done safely.
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
In case of fire may be liberated:
Carbon monoxide
Carbon dioxide (CO_2).

5.3 Advice for firefighters

Combustible
Vapours can form explosive mixtures with air.

The vapour is heavier than air and may travel along the ground; distant ignition possible.
The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.

5.4 Additional information

Do not inhale explosion and combustion gases.
Wear a self-contained breathing apparatus and chemical protective clothing.
Do not allow run-off from fire-fighting to enter drains or water courses.
Use water spray jet to protect personnel and to cool endangered containers.
In case of fire: Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear personal protection equipment (refer to section 8). Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Provide adequate ventilation.

6.2 Environmental precautions

Discharge into the environment must be avoided. Do not allow to enter into surface water or drains. Explosion risk.

6.3 Methods and material for containment and cleaning up

Cover drains. Absorb spillage to prevent material damage. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Dispose according to local legislation.

6.4 Additional information

Personal protection equipment: see section 8 SECTION 13. Information regarding the disposal of the products

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid:
Inhalation
Avoid contact with eyes and skin.
Use extractor hood (laboratory).
If handled uncovered, arrangements with local exhaust ventilation have to be used.
If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.
Usual measures for fire prevention.
Use personal protection equipment.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

7.2 Conditions for safe storage, including any incompatibilities

Recommended storage temperature: 15-25°C
Keep container tightly closed and in a well-ventilated place. Keep/Store away from combustible materials. Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Take precautionary measures against static discharges.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredient (Designation)	Source	Country	parameter	Limit value
2-Propanol	DNEL	EU	Worker, Dermal, long-term, systemic	888 mg/kg bw/day
2-Propanol	DNEL	EU	Worker, Inhalation, long-term, systemic	500 mg/m³
2-Propanol	PNEC	EU	aquatic, freshwater	140.9 mg/l
2-Propanol	PNEC	EU	aquatic, marine water	140.9 mg/l
2-Propanol	PNEC	EU	freshwater - intermittent	140.9 mg/l
2-Propanol	PNEC	EU	Predators, secondary poisoning	160 mg/kg
2-Propanol	PNEC	EU	sediment, freshwater	552 mg/kg
2-Propanol	PNEC	EU	sediment, marine water	552 mg/kg
2-Propanol	PNEC	EU	Sewage treatment plant	2 251 mg/l
2-Propanol	PNEC	EU	soil	28 mg/kg
2-Propanol	Chemical Agents Code of Practice 2020	IE	LTV	200 ppm
2-Propanol	Chemical Agents Code of Practice 2020	IE	STV	400 ppm

8.2 Exposure controls

Appropriate engineering controls
Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment
Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

Eye/face protection
Eye glasses with side protection DIN-/EN-Norms EN 166

Skin protection
When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Recommended glove articles DIN-/EN-Norms EN ISO 374 In the case of wanting to use the gloves again, clean them before taking off and air them well.

By short-term hand contact

Suitable material:	Butyl caoutchouc (butyl rubber)/FKM (fluoro rubber)
Thickness of the glove material:	0,70 mm
Breakthrough time:	> 480 min

By long-term hand contact

Suitable material:	Butyl caoutchouc (butyl rubber)/FKM (fluoro rubber)
Thickness of the glove material:	0,70 mm
Breakthrough time:	> 480 min

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Suitable respiratory protection apparatus:	Full-/half-/quarter-face masks (EN 136/140)
Recommendation	VWR 111-0206
Suitable material	ABEK2P3
Recommendation	VWR 111-0059

Additional information

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Colour:	colourless
(b) Odour:	no data available
(c) Odour threshold:	no data available

Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	-89 °C
(f) Initial boiling point and boiling range:	82 °C (1013 hPa)
(g) Flash point:	12 °C
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	Highly flammable liquid and vapour.
(j) Flammability or explosive limits	
Lower explosion limit:	2.3 % (v/v)
Upper explosion limit:	12.7 % (v/v)
(k) Vapour pressure:	43 hPa (20 °C)
(l) Vapour density:	2.07 (20 °C)
(m) Density:	0.786 g/cm³ (20 °C)
(n) Solubility(ies)	
Water solubility:	soluble (20 °C)
(o) Partition coefficient: n-octanol/water:	0.05 (20 °C)
(p) Auto-ignition temperature:	425 °C (DIN 51794)
(q) Decomposition temperature:	not applicable
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	2.2 mPa*s (20 °C)
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable
(u) Particle characteristics:	does not apply to liquids

9.2 Other information

Bulk density:	no data available
Refraction index:	0.3852 (589 nm; 20 °C)
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is non-reactive under normal conditions.
Risk of ignition if heated.
Vapour can form explosive mixtures with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Reaction with:
Oxidising agent, strong.

10.4 Conditions to avoid

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).
Avoid high temperatures or direct sunlight.

10.5 Incompatible materials

Rubber articles
Plastic articles

10.6 Hazardous decomposition products

Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects
Acute oral toxicity:
LD50: > 5045 mg/kg - Rat - (RTECS)

LDLo: > 3570 mg/kg - Human - (RTECS)

Acute dermal toxicity:
LD50: > 12800 mg/kg - Rabbit - (RTECS)

Acute inhalation toxicity:
LC50: 72600 mg/m³ - Rat - (Japan GHS Basis for Classification Data)

Irritant and corrosive effects:
Primary irritation to the skin:
not applicable

Irritation to eyes:
Causes serious eye irritation.

Irritation to respiratory tract:
not applicable

Respiratory or skin sensitisation
In case of skin contact: not sensitising
After inhalation: not sensitising

STOT-single exposure
May cause drowsiness or dizziness.

STOT-repeated exposure
not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Carcinogenicity
No indication of human carcinogenicity.

Germ cell mutagenicity
No indications of human germ cell mutagenicity exist.

Reproductive toxicity
No indications of human reproductive toxicity exist.

Aspiration hazard
not applicable

Other adverse effects
no data available

Additional information
no data available

11.2 Endocrine disrupting properties
This substance does not have endocrine disrupting properties with respect to humans.

SECTION 12: Ecological information

12.1 Ecotoxicity

Fish toxicity:
LC50: 9640 mg/l (96 h) - Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott 1984. Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 1. Center for Lake Superior Environmental Stud., Univ.of Wisconsin-Superior, Superior, WI :414

Daphnia toxicity:
LC50: 1400 mg/l (48 h) - Blackman, R.A.A. 1974. Toxicity of Oil-Sinking Agents. Mar.Pollut.Bull. 5:116-118

Algae toxicity:
no data available

Bacteria toxicity:
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water: 0.05 (20 °C)

12.4 Mobility in soil:
no data available

12.5 Results of PBT/vPvB assessment
This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

12.6 Endocrine disrupting properties
This substance does not have endocrine disrupting properties with respect to the environment.

12.7 Other adverse effects
no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Appropriate disposal / Product
Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package
Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1	UN-No.:	1219
14.2	Proper Shipping Name:	ISOPROPANOL
14.3	Class(es):	3
	Classification code:	F1
	Hazard label(s):	3
14.4	Packing group:	II
14.5	Environmental hazards**:**	No
14.6	Special precautions for user**:**	
	Hazard identification number (Kemler No.):	33
	tunnel restriction code:	D/E (Passage forbidden through tunnels of category D when carried in bulk or in tanks. Passage forbidden through tunnels of category E.)

Sea transport (IMDG)

14.1	UN-No.:	1219
14.2	Proper Shipping Name:	ISOPROPANOL
14.3	Class(es):	3
	Classification code:	
	Hazard label(s):	3
14.4	Packing group:	II
14.5	Environmental hazards**:**	No
	Marine pollutant:	No
14.6	Special precautions for user**:**	
	Segregation group:	-
	EmS-No.	F-E S-D

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not relevant

Air transport (ICAO-TI / IATA-DGR)

14.1	UN-No.:	1219
14.2	Proper Shipping Name:	ISOPROPANOL
14.3	Class(es):	3
	Classification code:	
	Hazard label(s):	3
14.4	Packing group:	II
14.5	Special precautions for user:	

SECTION 15: Regulatory information

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

EU legislation

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Text with EEA relevance)
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance)
- Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Text with EEA relevance)
- Commission Regulation (EU) 2020/878 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

National regulations

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Water hazard class: slightly hazardous to water

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygiensts
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)
CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures
DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)
DNEL - Derived No Effect Level
Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
KOSHA - Korea Occupational Safety and Health Agency
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PNEC - Predicted No Effect Concentration
RID - Regulation concerning the International Carriage of Dangerous Goods by Rail
STV - Short Term Value
SVHC - Substances of Very High Concern
vPvB - very Persistent, very Bioaccumulative

Training advice: Provide adequate information, instruction and training for operators.

Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

Additional information

Indication of changes: Implementation: Commission Regulation (EU) 2020/878

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

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