

SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.1
Prepared on : 30.03.2019
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SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name 1-Propanol
Product Number PSR37147 / PSR44969
Brand PureSynth research chemicals
CAS No. 71-23-8

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

Identified uses : Solvent for analytical purpose

1.3 Details of the supplier of the safety data sheet

Company PureSynth Research Chemicals GmbH.
64683 Einhausen Marie-Curie-Straße. 3, Germany

1.4 Emergency telephone number

Worldwide Helpline No.: 1800-8908-260

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids, (Category 2) H225: Highly flammable liquid and vapor.
Serious eye damage, (Category 1) H318: Causes serious eye damage.
Specific target organ toxicity - single exposure, (Category 3), Central nervous system H336: May cause drowsiness or dizziness.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.

P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
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/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher

SECTION 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
n-Propyl Alcohol	C ₃ H ₈ O	71-23-8
Component	Classification	Concentration
1-Propanol	Flam. Liq. 2; Eye Dam. 1; STOT SE 3; H225, H318, H336 Concentration limits: 20 %: STOT SE 3, H336;	<= 100 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Call in physician.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.
In case of eye contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed	After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

SECTION 5: Fire fighting measures

Extinguishing media suitable extinguishing media	Carbon dioxide (CO ₂) Foam Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture	Carbon oxides
	Combustible.
	Pay attention to flashback.
	Vapors are heavier than air and may spread along floors.
Advice for fire-fighters	Development of hazardous combustion gases or vapours possible in the event of fire.
	Forms explosive mixtures with air at ambient temperatures.
Further information	In the event of fire, wear self-contained breathing apparatus.
	Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental precautions	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning up	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling	Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Change contaminated clothing. Wash hands after working with substance. For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.
Specific end use(s)	Storage class (TRGS 510): 3: Flammable liquids Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls / Personal protection

Control parameters	Ingredients with workplace control parameters
Appropriate engineering controls	
Personal protective equipment:	
Eye / face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from

those stated in EN 16523-1 please contact the supplier of CE-approved gloves

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

Appearance	Form: clear, liquid Colour: colorless
Odour	alcohol-like
pH - Value	8.5 at 200 g/l at 20 °C
Density	0.804 g/mL at 25 °C
Boiling Point	97 °C
Melting Point	-127 °C
Solubility in water	at 20 °C completely miscible
Flash point	22 °C - closed cup
Vapour pressure	19.3 hPa at 20 °C
Auto -ignition temperature	400 °C at 1013.25 hPa
Vapour density	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Partition coefficient: n- octanol / water	log Pow: 0.2 at 25 °C - Bioaccumulation is not expected.
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 2.21 mPa.s at 20 °C
Explosive properties	Not classified as explosive.
Upper / lower flammability or explosive limits	Upper explosion limit: 13.7 %(V) Lower explosion limit: 2.1 %(V)
Oxidizing properties	None

Other safety information: Surface tension: 23.45 mN/m at 20 °C
Relative vapor density: 2.07 - (Air = 1.0)

SECTION 10: Stability and reactivity

Reactivity	Vapors may form explosive mixture with air.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) . Exothermic reaction with:
Possibility of hazardous reactions	Alkaline earth metals alcoholates Alkali metals Release of: Hydrogen Violent reactions possible with: Strong oxidizing agents
Condition to avoid	Warming.
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	Symptoms: Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis. LC50 Inhalation - Rat - male and female - 4 h - > 33.8 mg/l - vapor Symptoms: Possible damages:, mucosal irritations LD50 Dermal - Rabbit - male - 4.032 mg/kg
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation
Serious eye damage/eye irritation	Eyes - Rabbit Result: Causes serious eye damage. Maximization Test - Guinea pig Result: negative
Respiratory or skin sensitization	Patch test: - Human Result: negative Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Result: negative
Germ cell mutagenicity	Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Result: negative
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness. - Central nervous system

Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
Additional Information	
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 4.555 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 3.644 mg/l - 48 h
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 9.170 mg/l - 48 h
Toxicity to bacteria	static test IC50 - activated sludge - > 1.000 mg/l - 3 h

Persistence and degradability

Biodegradability	aerobic - Exposure time 20 d Result: 75 % - Readily biodegradable. Chemical Oxygen Demand (COD): 2.230 mg/g Theoretical oxygen demand: 2.400 mg/g Ratio BOD/ThBOD: < 2 %
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Biodegradability

Bio accumulative potential	The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.
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Mobility in soil	No data available
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Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Endocrine disrupting properties	

Other adverse effects	No data available
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SECTION 13: Disposal considerations

Waste treatment methods	Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleansed containers like the product itself.
Products	
Contaminated packaging	Dispose of as unused product.

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	1274	n-PROPANOL	3	II	No
IMDG	1274	n-PROPANOL	3	II	No
IATA	1274	n-Propanol	3	II	No

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

The information in this SDS is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The user must be determined suitability of this information for his application.