

SAFETY DATA SHEET

according to 1907/2006/EC, Article 3

Version no. : 2.1
Prepared on : 12.08.2025
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SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name n-Butanol
Product Number PSR43398 / PSR4034 / PSR45081
Brand PureSynth research chemicals
CAS No. 71-36-3

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

Identified uses : Laboratory chemicals

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 3), H226
Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word Danger

Hazard statement(s)

H315 Causes skin irritation.
H318 Causes serious eye damage.
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary statement(s)

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

	Remove contact lenses, if present and easy to do. Continue rinsing.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P280	Wear protective gloves, eye protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
Supplemental Hazard Statements	none

2.3 Other hazards:

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

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.

Toxicological information:

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 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
n- Butyl alcohol	C ₄ H ₁₀ O	71-36-3
Component	Classification	Concentration
n-butanol	Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; H226, H302, H315, H318, H336, H335 Concentration limits: >= 20 %: STOT SE 3, H335; >= 20 %: STOT SE 3, H336	<= 100 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
In case of skin contact	Wash off with soap and plenty of water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water as precaution.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water.
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: Firefighting measures

Extinguishing media	Foam Carbon dioxide (CO ₂) Dry powder
Suitable extinguishing media	Carbon oxides
Special hazards arising from the substance or mixture	Flash back possible over considerable distance. Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Remove container from danger zone and cool with water.
Further information	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. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face 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. Handle and store under inert gas. hygroscopic Storage class (TRGS 510): 3: Flammable liquids
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

Control parameters	Components with workplace control parameters
Exposure controls	
Appropriate engineering controls	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment: Eye / face protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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 glove.

Full contact Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Splash contact Material: Chloroprene

Minimum layer thickness: 0.65 mm

Break through time: 120 min

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

Appearance	Form: Liquid, clear Colour: colorless
Odour	No data available
pH - Value	7 at 70 g/l at 20 °C
Density	0.81 g/mL at 25 °C (lit.)
Boiling Point	116-118 °C (lit.)
Melting Point	-90 °C (lit.)
Solubility in water	66 g/l at 20 °C - OECD Test Guideline 105
Flash point	35 °C
Vapour pressure	< 10 hPa at 20 °C
Auto -ignition temperature	649 °F
Vapour density	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Partition coefficient: n- octanol / water	No data available
Viscosity	No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	Upper explosion limit: 11.2 %(V) Lower explosion limit: 1.4 %(V)
Oxidizing properties	No data available

Other safety information:

Surface tension: 69.9 mN/m at 1g/l at 20 °C

Relative vapor density: 2.56 at 20 °C - (Air = 1.0)

SECTION 10: Stability and reactivity

Reactivity	Vapor/air-mixtures are explosive at intense warming.
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) . Risk of ignition or formation of inflammable gases or vapours with: strong oxidising agents chromium(VI) oxide
Possibility of hazardous reactions	Exothermic reaction with: Alkali metals, Alkaline earth metals Aluminum strong reducing agents Acid chlorides
Condition to avoid	Exposure to moisture. Heating.
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	LD50 Oral - Rat - 790 mg/kg Remarks: Liver:Fatty liver degeneration. Kidney, Ureter, Bladder:Other changes. Blood:Other changes.
Skin corrosion/irritation	LD50 Dermal - Rabbit - male - 3.430 mg/kg Skin - Rabbit Result: Skin irritation - 2 h
Serious eye damage/eye irritation	Eyes - Rabbit Result: Irreversible effects on the eye
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	Mutagenicity (mammal cell test): micronucleus. Chinese hamster lung cells Result: negative In vitro mammalian cell gene mutation test Chinese hamster lung cells Result: negative Mouse - male and female Result: negative
Carcinogenicity	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	May cause respiratory irritation. May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure Aspiration hazard	No data available
Additional Information	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. RTECS: EO1400000 Central nervous system depression, Gastrointestinal disturbance, drying, cracking of the skin, Skin irritation, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

Toxicity

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 1.376 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 1.328 mg/l - 48 h
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 225 mg/l - 96 h
Toxicity to bacteria	static test EC50 - Pseudomonas putida - 4.390 mg/l - 17 h
Persistence and degradability	aerobic - Exposure time 20 d Result: 92 % - Readily biodegradable. Remarks: (ECHA)
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects	No data available

SECTION 13: Disposal considerations

Waste treatment methods	No data available
Products	
Contaminated packaging	No data available

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	1120	BUTANOLS	3	III	No
IMDG	1120	BUTANOLS	3	III	No
IATA	1120	Butanols	3	III	No

SECTION 15: Regulatory information

15.1 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.

Authorisations and/or restrictions on use

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. P5c Flammable liquids

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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.