

Safety Data Sheet

N-PROPANOL

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Version: 6.0

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1. Identification

Product identifier used on the label

N-PROPANOL

Recommended use of the chemical and restriction on use

Recommended use*: solvent(s)

Recommended use*: for industrial use only

Unsuitable for use: Not intended for sale to or use by the general public.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: alcohol

2. Hazards Identification

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

| | | |
|------------|---|--|
| Flam. Liq. | 2 | Flammable liquids |
| Eye Dam. | 1 | Serious eye damage |
| STOT SE | 3 (May cause drowsiness and dizziness.) | Specific target organ toxicity — single exposure |

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Label elements

Pictogram:



Signal Word:
Danger

Hazard Statement:

| | |
|------|-------------------------------------|
| H225 | Highly flammable liquid and vapour. |
| H318 | Causes serious eye damage. |
| 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 and eye protection or face protection. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P243 | Take action to prevent static discharges. |
| P261 | Avoid breathing mist or vapour or spray. |
| P241 | Use explosion-proof electrical, ventilating and lighting equipment. |
| P240 | Ground and bond container and receiving equipment. |
| P242 | Use non-sparking tools. |

Precautionary Statements (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. |
| P310 | Immediately call a POISON CENTER or physician. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P370 + P378 | In case of fire: Use alcohol-resistant foam, carbon dioxide, dry powder or water spray for extinction. |

Precautionary Statements (Storage):

| | |
|-------------|--|
| P233 | Keep container tightly closed. |
| P403 + P235 | Store in a well-ventilated place. Keep cool. |
| P405 | Store locked up. |

Precautionary Statements (Disposal):

| | |
|------|---|
| P501 | Dispose of contents/container in accordance with local regulations. |
|------|---|

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture. See section 12 - Results of PBT and vPvB assessment.

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3. Composition / Information on Ingredients

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

| 1-Propanol
| CAS Number: 71-23-8
| Content (W/W): ≥ 99.5 - $\leq 100.0\%$
| Synonym: 1-Propanol; Propyl alcohol

4. First-Aid Measures

Description of first aid measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause:, headache, dizziness, coordination disorder, coma, abdominal cramps, nausea, vomiting

Hazards: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11. (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

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Suitable extinguishing media:
dry powder, water spray, carbon dioxide, alcohol-resistant foam

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
Highly flammable. Cool endangered containers with water-spray. See SDS section 7 - Handling and storage.

Advice for fire-fighters

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear. Special protective equipment for firefighters

Further information:

Evacuate area of all unnecessary personnel. Fight fire from maximum distance.

Extend fire extinguishing measures to the surroundings. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Further accidental release measures:

High risk of slipping due to leakage/spillage of product.

Release of substance/product can cause fire or explosion. Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition: heat, sparks, open flame. Use antistatic tools.

Environmental precautions

Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Pick up with suitable appliance and dispose of. Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations.

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7. Handling and Storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Avoid all sources of ignition: heat, sparks, open flame. Ground all transfer equipment properly to prevent electrostatic discharge.

Conditions for safe storage, including any incompatibilities

No applicable information available.

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

| | | |
|------------|-------------|---|
| 1-Propanol | ACGIH, US: | TWA value 100 ppm ; |
| | OSHA Z1: | PEL 200 ppm 500 mg/m3 ; |
| | NIO ID, US: | IDLH 800 ppm ; IDLH values based on the 1994 Revised Criteria |
| | NIO ID, US: | LEL 2.2 % ; |

Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour respirator. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Wear chemical resistant protective gloves., Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid inhalation of vapour.

9. Physical and Chemical Properties

Physical state: liquid
Form: liquid

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| | | |
|---|--|--|
| Odour: | alcohol-like | |
| Odour threshold: | not determined | |
| Colour: | colourless | |
| pH value: | approx. 7 (200 g/l) | |
| Melting point: | -127.05 °C (1,013 hPa) Literature data. | |
| Freezing point: | No data available. | |
| Boiling point: | 97 °C (1,013 hPa) Literature data. | |
| Sublimation point: | No applicable information available. | |
| Flash point: | 21.5 - 25.5 °C | (DIN 51755, closed cup) |
| Flammability: | Highly flammable liquid and vapour. | (derived from flash - and boiling point) |
| Lower explosion limit: | For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point. | |
| Upper explosion limit: | For liquids not relevant for classification and labelling. | |
| Heat of Combustion: | 33.63 kJ/g | |
| Autoignition: | 400 °C | (DIN 51794) |
| Vapour pressure: | 28.2 hPa (25 °C) Literature data. | (measured) |
| Density: | 0.8037 g/cm3 (20 °C) | (DIN 51757) |
| Relative density: | 0.8037 (20 °C) | |
| Relative vapour density: | 2.07 (20 °C) Heavier than air. | (calculated) |
| Partitioning coefficient n-octanol/water (log Pow): | 0.2 (25 °C) | (OECD Guideline 117) |
| Self-ignition temperature: | Based on its structural properties the product is not classified as self-igniting. | |
| Thermal decomposition: | No data available. | |
| Viscosity, dynamic: | 2.3 mPa.s (20 °C) Literature data. | |
| Viscosity, kinematic: | No data available. | |
| Solubility in water: | (20 °C) miscible | |
| Solubility (quantitative): | No applicable information available. | |
| Solubility (qualitative): | soluble solvent(s): organic solvents, | |
| Molecular weight: | 60.10 g/mol | |
| Evaporation rate: | Value can be approximated from Henry's Law Constant or vapor pressure. | |
| Other Information: | Study technically not feasible. | |

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Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form.

10. Stability and Reactivity

Reactivity

When heated can give off ignitable vapours.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

| | | |
|-------------------------------|----------|--|
| Formation of flammable gases: | Remarks: | Forms no flammable gases in the presence of water. |
|-------------------------------|----------|--|

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Reacts with strong oxidizing agents.

Conditions to avoid

No special precautions other than good housekeeping of chemicals.

Incompatible materials

strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

No data available.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Of low toxicity after short-term skin contact.

If used as intended, this product is not expected to present a physical or health hazard.

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Oral

Type of value: LD50
Species: rat
Value: approx. 8,000 mg/kg (BASF-Test)

Type of value: LD50
Species: rat
Value: 1,870 mg/kg (similar to OECD guideline 401)

Type of value: LD50
Species: rat
Value: 6,500 mg/kg

Inhalation

Type of value: LC50
Species: rat
Value: > 33.8 mg/l (OECD Guideline 403)
Exposure time: 4 h
The vapour was tested.
No mortality was observed.

Dermal

Type of value: LD50
Species: rabbit
Value: 4,032 mg/kg (similar to OECD guideline 402)
Literature data.

Assessment other acute effects

Assessment of STOT single:
Possible narcotic effects (drowsiness or dizziness).

Irritation / corrosion

Assessment of irritating effects: Not irritating to the skin. May cause severe damage to the eyes.

Skin

Species: rabbit
Result: non-irritant
Method: BASF-Test

Eye

Species: rabbit
Result: irreversible damage
Method: BASF-Test

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Guinea pig maximization test
Species: guinea pig
Result: Non-sensitizing.
Method: similar to OECD guideline 406
Literature data.

Aspiration Hazard

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Some authorities consider isobutyl alcohol, n-primary alcohols and ketones with C3-C13 as "May be harmful if swallowed and enters airways"

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated inhalative uptake of the substance did not cause substance-related effects.

Genetic toxicity

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity

Assessment of carcinogenicity: Results from poorly documented long-term studies in animals did not give a clear indication of a carcinogenic effect.

The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: The potential to cause toxicity to development cannot be excluded when given in high doses. Literature data.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) 4,555 mg/l, Pimephales promelas (Fish test acute, Flow through.)
The statement of the toxic effect relates to the analytically determined concentration. Literature data.

Aquatic invertebrates

EC50 (48 h) 3,644 mg/l, Daphnia magna (DIN 38412 Part 11, static)
The details of the toxic effect relate to the nominal concentration. Literature data.

Aquatic plants

No observed effect concentration (48 h) 1,150 mg/l (growth rate), Chlorella sp. (Algal growth inhibition test, static)
The details of the toxic effect relate to the nominal concentration. Literature data.

Chronic toxicity to fish

No observed effect concentration (35 d) > 11.58 mg/l, Brachydanio rerio (OECD Guideline 210, Flow through.)
The statement of the toxic effect relates to the analytically determined concentration.

Chronic toxicity to aquatic invertebrates

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No observed effect concentration (21 d) \geq 3.22 mg/l, Daphnia magna (OECD Guideline 211, Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

Assessment of terrestrial toxicity

Study scientifically not justified.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aquatic

activated sludge, domestic/EC50 (3 h): > 1,000 mg/l

Literature data.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Readily biodegradable (according to OECD criteria).

Elimination information

75 % BOD of the ThOD (20 d) (other) (aerobic, domestic sewage)

Assessment of stability in water

According to structural properties, hydrolysis is not expected/probable.

Information on Stability in Water (Hydrolysis)

Study scientifically not justified.

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

No data available. Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is not expected.

Additional information

Adsorbable organically-bound halogen(AOX):

This product contains no organically-bound halogen.

Other ecotoxicological advice:

Do not release untreated into natural waters. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

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13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations. Do not discharge into waterways or sewer systems without proper authorization.

Container disposal:

Uncleaned empties should be disposed of in the same manner as the contents.

Dispose of container and any rinsate in an environmentally safe manner. Uncleaned empties should be disposed of in the same manner as the contents.

RCRA: D001

14. Transport Information

Land transport

USDOT

| | |
|-----------------------|-------------------------------------|
| Hazard class: | 3 |
| Packing group: | II |
| ID number: | UN 1274 |
| Hazard label: | 3 |
| Proper shipping name: | N-PROPANOL (PROPYL ALCOHOL, NORMAL) |

Sea transport

IMDG

| | |
|-----------------------|-------------------------------------|
| Hazard class: | 3 |
| Packing group: | II |
| ID number: | UN 1274 |
| Hazard label: | 3 |
| Marine pollutant: | NO |
| Proper shipping name: | N-PROPANOL (PROPYL ALCOHOL, NORMAL) |

Air transport

IATA/ICAO

| | |
|-----------------------|------------|
| Hazard class: | 3 |
| Packing group: | II |
| ID number: | UN 1274 |
| Hazard label: | 3 |
| Proper shipping name: | N-PROPANOL |

15. Regulatory Information

Federal Regulations**Registration status:**

Chemical TSCA, US

All substances are TSCA listed and active.

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EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

| <u>CERCLA RQ</u> | <u>CAS Number</u> | <u>Chemical name</u> |
|------------------|-------------------|----------------------|
| 100 LBS | 71-23-8 | 1-Propanol |

NFPA Hazard codes:

Health: 2 Fire: 3 Reactivity: 0 Special:

HMIS III rating

Health: 2 Flammability: 3 Physical hazard: 0

Assessment of the hazard classes according to UN GHS criteria (most recent version):

| | | |
|------------|---|--|
| Acute Tox. | 5 (dermal) | Acute toxicity |
| Eye Dam. | 1 | Serious eye damage |
| STOT SE | 3 (May cause drowsiness and dizziness.) | Specific target organ toxicity — single exposure |
| Flam. Liq. | 2 | Flammable liquids |

16. Other Information

SDS Prepared by:

BASF NA Product Regulations
SDS Prepared on: 2025/10/17

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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