

Safety Data Sheet

n-PENTANOL

Revision date : 2025/09/04
Version: 2.0

Page: 1/12
(30036709/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

n-PENTANOL

Recommended use of the chemical and restriction on use

Recommended use*: Chemical

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

Molecular formula: $\text{CH}_3\text{-(CH}_2\text{)}_3\text{-CH}_2\text{OH}$
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.	3	Flammable liquids
Skin Irrit.	2	Skin irritation
Eye Dam.	1	Serious eye damage
STOT SE	3 (irritating to	Specific target organ toxicity — single exposure

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 2/12
(30036709/SDS_GEN_US/EN)

Aquatic Chronic 2 respiratory system) Hazardous to the aquatic environment - chronic

Label elements

Pictogram:



Signal Word:
Danger

Hazard Statement:

H226	Flammable liquid and vapour.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye protection or face protection.
P273	Avoid release to the environment.
P271	Use only outdoors or in a well-ventilated area.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing mist or vapour or spray.
P243	Take action to prevent static discharges.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P264	Wash contaminated body parts thoroughly after handling.
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.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P391	Collect spillage.
P362 + P364	Take off contaminated clothing and wash it before reuse.
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

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 3/12
(30036709/SDS_GEN_US/EN)

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.

3. Composition / Information on Ingredients

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

pentan-1-ol

CAS Number: 71-41-0

Content (W/W): > 99.0 - <= 100.0%

Synonym: 1-Pentanol; Pentyl alcohol, n-Amyl alcohol

4. First-Aid Measures

Description of first aid measures

General advice:

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:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Immediate medical attention required.

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, 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.

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 4/12
(30036709/SDS_GEN_US/EN)

5. Fire-Fighting Measures

Extinguishing media

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:
Flammable liquid 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.

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.

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 5/12
(30036709/SDS_GEN_US/EN)

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

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:

Chemical resistant protective gloves

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

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:

Avoid inhalation of vapours/mists. Wear protective clothing as necessary to prevent contact.

9. Physical and Chemical Properties

Physical state:	liquid	
Form:	liquid	
Odour:	sweetish	
Odour threshold:	not determined	
Colour:	colourless	
pH value:	approx. 7	
Melting point:	-78.6 °C	(OECD Guideline 102)
Freezing point:	No data available.	

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 6/12
(30036709/SDS_GEN_US/EN)

Boiling point:	138 °C (1,013.25 hPa)	(other)
Flash point:	47 °C	(ISO 13736, closed cup)
Flammability:	Flammable.	(derived from flash 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:	37.68 kJ/g	
Autoignition:	300 °C	(DIN 51794)
Vapour pressure:	2.04 hPa (20 °C)	(measured)
Density:	dynamic 0.81 g/cm3 (20 °C)	
Relative density:	Literature data. 0.81 (20 °C)	(other)
Relative vapour density:	Literature data. 3.03 (20 °C)	(calculated)
Partitioning coefficient n-octanol/water (log Pow):	Heavier than air. 1.51 (25 °C)	(measured)
Refractive index:	Literature data. 1.410 (20 °C)	(DIN 51423-1)
Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.	
Viscosity, dynamic:	3.441 mPa.s (24.9 °C)	
Solubility in water:	Literature data. 19.4 g/l (20 °C)	
Solubility (qualitative):	soluble	
Molecular weight:	solvent(s): organic solvents, 88.15 g/mol	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

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.

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 7/12
(30036709/SDS_GEN_US/EN)

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

No hazardous reactions if stored and handled as prescribed/indicated.

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.
2 K/min (DSC (DIN 51007))

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: Of low toxicity after single ingestion. Of low toxicity after short-term skin contact. In animal studies the substance is virtually nontoxic after short-term inhalation. The European Union (EU) has classified this substance as 'harmful' after inhalation.

Oral

Type of value: LD50

Species: rat

Value: approx. 3,645 mg/kg (BASF-Test)

Inhalation

Type of value: LC0

Species: rat

Value: 8.29 mg/l (IRT)

Exposure time: 8 h

The vapour was tested.

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 8/12
(30036709/SDS_GEN_US/EN)

No mortality within the stated exposition time as shown in animal studies. The European Union (EU) has classified this substance as 'harmful'.

Dermal

Type of value: LD50

Species: rabbit

Value: 2,292 mg/kg (similar to OECD guideline 402)

Assessment other acute effects

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

Irritation / corrosion

Assessment of irritating effects: Skin contact causes irritation. May cause severe damage to the eyes.

Skin

Species: rabbit

Result: Corrosive.

Method: BASF-Test

Eye

Species: rabbit

Result: irreversible damage

Method: BASF-Test

Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Species: In vitro assay

Result: Non-sensitizing.

Method: In vitro skin sensitization test battery

Aspiration Hazard

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 oral 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. The substance was not mutagenic in a test with mammals. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity

Assessment of carcinogenicity: A long-term carcinogeny study which does not meet the current requirements did not show a carcinogenic effect.

Reproductive toxicity

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 9/12
(30036709/SDS_GEN_US/EN)

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Other Information

Has a degreasing effect on skin.

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. Toxic to aquatic organisms based on long-term (chronic) toxicity study data.

Toxicity to fish

LC50 (96 h) 530 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EWG, C.1, static)
Nominal concentration.

Aquatic invertebrates

EC50 (48 h) 341 mg/l, Daphnia magna (Directive 79/831/EEC, static)
Nominal concentration.

Aquatic plants

Toxic limit concentration (8 d) 260 mg/l (growth rate), Scenedesmus quadricauda (Algal growth inhibition test, static)
Nominal concentration. Literature data.

Chronic toxicity to fish

No observed effect concentration (35 d) 10 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

EC10 (21 d) 0.059 mg/l, Daphnia magna (OECD Guideline 211, semistatic)
The statement of the toxic effect relates to the analytically determined concentration.

Assessment of terrestrial toxicity

No data available concerning terrestrial toxicity.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

OECD Guideline 209 aerobic

activated sludge, domestic/EC10 (3 h): 370 mg/l

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 10/12
(30036709/SDS_GEN_US/EN)

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Readily biodegradable (according to OECD criteria).

Elimination information

100 % CO₂ formation relative to the theoretical value (18 d) (OECD Guideline 310) (aerobic, activated sludge, domestic)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment of stability in water

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

Bioaccumulative potential

Assessment bioaccumulation potential

Significant accumulation in organisms is not to be expected.

Bioaccumulation potential

No data available.

Mobility in soil

Assessment transport between environmental compartments

The substance will slowly 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.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations.

Container disposal:

Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. If containers are not empty, they must be disposed of in a RCRA-licensed facility.

14. Transport Information

Land transport

USDOT

Hazard class: 3

Packing group: III

ID number: UN 1105

Hazard label: 3, EHSM

Proper shipping name: PENTANOLS

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 11/12
(30036709/SDS_GEN_US/EN)

Sea transport

IMDG
Hazard class: 3
Packing group: III
ID number: UN 1105
Hazard label: 3, EHSM
Marine pollutant: YES
Proper shipping name: PENTANOLS

Air transport

IATA/ICAO
Hazard class: 3
Packing group: III
ID number: UN 1105
Hazard label: 3
Proper shipping name: PENTANOLS

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US

All substances are TSCA listed and active.

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	71-41-0	pentan-1-ol

State regulations

<u>State RTK</u>	<u>CAS Number</u>	<u>Chemical name</u>
NJ	71-41-0	pentan-1-ol
PA	71-41-0	pentan-1-ol

NFPA Hazard codes:

Health: 3 Fire: 2 Reactivity: 0 Special:

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

Flam. Liq.	3	Flammable liquids
Acute Tox.	5 (oral)	Acute toxicity
Acute Tox.	5 (dermal)	Acute toxicity
Eye Dam.	1	Serious eye damage
Skin Irrit.	2	Skin irritation
STOT SE	3 (irritating to respiratory system)	Specific target organ toxicity — single exposure
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic

Safety Data Sheet

n-PENTANOL

Revision date: 2025/09/04
Version: 2.0

Page: 12/12
(30036709/SDS_GEN_US/EN)

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2025/09/04

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.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

Date / Revised: 2025/09/04
Date / Previous version: 2021/07/23

Version: 2.0
Previous version: 1.0

END OF DATA SHEET