

Safety Data Sheet

3-Amino-1-propanol

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Version: 7.0

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1. Identification

Product identifier used on the label

3-Amino-1-propanol

Recommended use of the chemical and restriction on use

Recommended use*: Only to be used as intermediate according to the REACH Regulation (EC) No 1907/2006, art. 18, Exceptions - if any - may be possible after prior agreement with the supplier
Recommended use*: Intermediate

* 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: alkanolamine

Synonyms: 3-aminopropan-1-ol Use: Only to be used as intermediate
according to the REACH Regulation (EC) No 1907/2006, art. 18.

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.
Skin Corr.

4 (oral)
1B

Acute toxicity
Skin corrosion

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Eye Dam. 1 Serious eye damage

Label elements

Pictogram:



Signal Word:
Danger

Hazard Statement:

H314 Causes severe skin burns and eye damage.
H302 Harmful if swallowed.

Precautionary Statements (Prevention):

P280 Wear protective gloves, protective clothing and eye protection or face protection.
P260 Do not breathe mist or vapour.
P270 Do not eat, drink or smoke when using this product.
P264 Wash contaminated body parts thoroughly after handling.

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.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P363 Wash contaminated clothing before reuse.

Precautionary Statements (Storage):

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.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

3-aminopropan-1-ol

CAS Number: 156-87-6

Content (W/W): ≥ 99.8 - $\leq 99.92\%$

Synonym: .beta.-Alaninol

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4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:

Wash affected areas thoroughly with soap and water. Remove contaminated clothing. Immediate medical attention required.

If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: 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 are possible

Information on: 3-aminopropan-1-ol

Symptoms: Overexposure may cause: corneal injury, skin corrosion, severe pain, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

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. Pulmonary edema prophylaxis. Medical monitoring for at least 24 hours.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

water spray, dry powder, carbon dioxide, foam

Special hazards arising from the substance or mixture

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Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrous gases

The substances/groups of substances mentioned can be released in case of fire. Under certain conditions in case of fire other hazardous combustion products may be generated.

Advice for fire-fighters

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Cool endangered containers with water-spray. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear suitable personal protective clothing and equipment. Information regarding personal protective measures, see section 8. Avoid contact with skin and eyes. Avoid inhalation. Ensure adequate ventilation.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

This product is not regulated by RCRA.

Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Refill and handle product only in closed system. Use only alkali-proof equipment. The workplace should be equipped with an emergency shower and eye-rinsing facility. Provide good room ventilation even at ground level (vapours are heavier than air).

Protection against fire and explosion:

The product is combustible. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

See SDS section 5 - Fire fighting measures. Moderate explosion hazard when exposed to heat or flames.

Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances.

Suitable materials for containers: Stainless steel 1.4401, Stainless steel 1.4301 (V2), High density polyethylene (HDPE), Carbon steel (Iron), glass, Low density polyethylene (LDPE)

Unsuitable materials for containers: Aluminium, Galvanized carbon steel (Zinc), Paper/Fibreboard, tinned carbon steel (Tinplate)

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Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Avoid extreme heat. Keep away from sources of ignition - No smoking.

Storage stability:

Storage duration: 24 Months

From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.

8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Suitable materials may include, nitrile rubber (NBR) - 0.4 mm coating thickness, polyvinylchloride (PVC) - 0.7 mm coating thickness, fluoroelastomer (FKM) - 0.7 mm coating thickness, fluoroelastomer (Viton), chloroprene rubber (CR) - 0.5 mm coating thickness, Manufacturer's directions for use should be observed because of great diversity of types.

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:

Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing. Eye wash fountains and safety showers must be easily accessible. Take off immediately all contaminated clothing. Store work clothing separately. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Form:	liquid
Odour:	fish-like
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	colourless to yellow

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pH value:	11.6 (10 g/l, 20 °C) Literature data.	(other)
Melting point:	11 - 12.4 °C (1,013.25 hPa) Literature data.	(other)
onset of boiling:	187.71 °C (1,013.25 hPa)	(other)
Flash point:	100 °C	(ISO 2719, closed cup)
Flammability:	hardly combustible	(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.	
Autoignition:	385 °C	(DIN 51794)
SADT:	Study scientifically not justified.	
Vapour pressure:	0.149 hPa (25 °C) dynamic 2.00 hPa (53.12 °C) dynamic	(measured)
Density:	0.9893 g/cm3 (20 °C)	(pycnometer)
Vapour density:	2.59 Heavier than air.	
Partitioning coefficient n-octanol/water (log Pow):	-1.12 (25 °C) Literature data.	(measured)
	-1.04 (25 °C)	(measured)
Self-ignition temperature:	not self-igniting	
Thermal decomposition:	230 kJ/kg (DSC (DIN 51007)) Thermal decomposition above the indicated temperature is possible. It is not a self-decomposable substance. No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	40.456 mPa.s (19.99 °C)	
Solubility in water:	(20 °C) soluble, Literature data.	
Miscibility with water:	miscible in all proportions	
Molar mass:	75.11 g/mol	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

10. Stability and Reactivity

Reactivity

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

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Corrosion to metals:

Corrosive effects to metal are not anticipated. In the presence of water or moisture metal corrosion cannot be excluded.

Oxidizing properties:

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

Formation of Remarks:

flammable gases:

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

Generation of heat upon exposure to acidic substances. Reacts with strong oxidizing agents.

Generation of explosive gases/vapours.

Conditions to avoid

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

Incompatible materials

mineral acids

Hazardous decomposition products

Decomposition products:

Possible thermal decomposition products: carbon monoxide, carbon dioxide, nitrogen oxides

Thermal decomposition:

(DSC (DIN 51007))

Thermal decomposition above the indicated temperature is possible. It is not a self-decompositionable substance. No decomposition if stored and handled as prescribed/indicated.

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 moderate toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Oral

Type of value: LD50

Species: rat (male/female)

Value: 1,348 mg/kg (OECD Guideline 401)

An aqueous solution was tested.

Inhalation

Type of value: LC50

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Species: rat (male/female)
Value: > 16.4 mg/l (IRT)
Exposure time: 1 h
An aerosol was tested.
No mortality was observed.

Dermal

Type of value: LD50
Species: rat (male/female)
Value: > 2,000 mg/kg (BASF-Test)
No mortality was observed.

Assessment other acute effects

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion

Assessment of irritating effects: Corrosive! Damages skin and eyes.

Skin

Species: rabbit
Result: Corrosive.
Method: Draize test

Eye

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

Sensitization

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

Skin painting test

Species: guinea pig
Result: Non-sensitizing.
Method: other

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: No reliable data was available concerning repeated dose toxicity.

Genetic toxicity

Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture.

Carcinogenicity

Assessment of carcinogenicity: No data available concerning carcinogenic effects.

Reproductive toxicity

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Assessment of reproduction toxicity: No reliable data are available concerning reproduction toxicity.

Teratogenicity

Assessment of teratogenicity: No reliable data was available concerning teratogenicity.

Other Information

No experimental evidence available for genotoxicity in vitro (Ames test negative).

Medical conditions aggravated by overexposure

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product. See SDS section 11 - Toxicological information.

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) > 100 - < 215 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

Nominal concentration. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample. After neutralization, it is no longer toxic.

Aquatic invertebrates

EC50 (48 h) > 500 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

The value meets the highest applied test concentration. Nominal concentration.

Aquatic plants

EC50 (72 h) 145.4 mg/l (growth rate), *Scenedesmus subspicatus* (DIN 38412 Part 9, static)

After neutralization, it is no longer toxic. Nominal concentration.

EC10 (72 h) 91.3 mg/l (growth rate), *Scenedesmus subspicatus* (DIN 38412 Part 9, static)

After neutralization, it is no longer toxic. Nominal concentration.

Chronic toxicity to fish

No data available.

Chronic toxicity to aquatic invertebrates

No data available.

Assessment of terrestrial toxicity

No data available concerning terrestrial toxicity.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

DIN 38412 Part 8 aquatic

bacterium/EC10 (17 h): 96 mg/l

Nominal concentration.

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OECD Guideline 209 aquatic
activated sludge, industrial/EC20 (0.5 h): > 1,995 mg/l
Nominal concentration.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)
Readily biodegradable (according to OECD criteria).

Elimination information

86 % BOD of the ThOD (28 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, Inoculum conforming to MITI requirements (OECD 301C))

Assessment of stability in water
According to structural properties, hydrolysis is not expected/probable.

Information on Stability in Water (Hydrolysis)
According to structural properties, hydrolysis is not expected/probable.

Bioaccumulative potential

Assessment bioaccumulation potential
Accumulation in organisms is not to be expected.

Bioaccumulation potential
Bioconcentration factor: 2.4, Fish (calculated)

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.
The data refer to the charged form of the substance.

Additional information

Other ecotoxicological advice:
Due to the pH-value of the product, neutralization is generally required before discharging sewage into treatment plants. Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:

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

Container disposal:

Contaminated packaging should be emptied as far as possible and disposed of in accordance with official regulations after being thoroughly cleaned. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

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14. Transport Information

Land transport

USDOT

Hazard class: 8
Packing group: II
ID number: UN 2735
Hazard label: 8
Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (contains 3-AMINOPROPAN-1-OL)

Sea transport

IMDG

Hazard class: 8
Packing group: II
ID number: UN 2735
Hazard label: 8
Marine pollutant: NO
Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (contains 3-AMINOPROPAN-1-OL)

Air transport

IATA/ICAO

Hazard class: 8
Packing group: II
ID number: UN 2735
Hazard label: 8
Proper shipping name: AMINES, LIQUID, CORROSIVE, N.O.S. (contains 3-AMINOPROPAN-1-OL)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

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

NFPA Hazard codes:

Health: 3 Fire: 1 Reactivity: 0 Special:

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

Acute Tox.	4 (oral)	Acute toxicity
Skin Corr.	1B	Skin corrosion
Eye Dam.	1	Serious eye damage

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16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2024/09/26

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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