

Safety Data Sheet

1,3-Diaminopropane

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Version: 2.0

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1. Identification

Product identifier used on the label

1,3-Diaminopropane

Recommended use of the chemical and restriction on use

Recommended use*: initial product for chemical syntheses; formulation agent

* The "Recommended use" identified for this product is provided solely to comply with a US 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

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Molecular formula: C(3)H(10)N(2)
Chemical family: diamines
Synonyms: Trimethylenediamine Use: Chemical used in synthesis and/or formulation of industrial products.

2. Hazards Identification

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

Classification of the product

Flam. Liq.	3	Flammable liquid
Acute Tox.	4 (oral)	Acute toxicity
Acute Tox.	2 (dermal)	Acute toxicity
Skin Corr./Irrit.	1B	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Resp. Sens.	1	Respiratory sensitization

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P310	Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P341 + P311	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
P303 + P361 + P352	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P301 + P330	IF SWALLOWED: rinse mouth.
P362 + P364	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

Precautionary Statements (Storage):

P405	Store locked up.
P403 + P235	Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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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.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

DANGER:

FLAMMABLE LIQUID.

CORROSIVE.

SENSITIZER.

TOXIC IF ABSORBED THROUGH SKIN.

Harmful if swallowed.

Corrosive to skin and/or eyes.

Respiratory and skin sensitizer

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Use with local exhaust ventilation.

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

Wear NIOSH-certified chemical goggles.

Wear protective clothing.

Eye wash fountains and safety showers must be easily accessible.

Wear full face shield if splashing hazard exists.

3. Composition / Information on Ingredients

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

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
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Hazards during fire-fighting:
No particular hazards known.

Advice for fire-fighters

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

Further information:

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

Personal precautions, protective equipment and emergency procedures

Avoid inhalation. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Substance/product is RCRA hazardous due to its properties.

Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

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

7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

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

Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances.

Suitable materials for containers: carbon steel (iron), Stainless steel 1.4541, Stainless steel 1.4571

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

Avoid extreme heat. Keep away from sources of ignition - No smoking. Keep container tightly closed in a cool, well-ventilated place.

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.

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Thermal decomposition:	340 °C, 450 J/g (DSC (DIN 51007)) It is not a self-decomposable substance.
Viscosity, dynamic:	1.83 mPa.s (20 °C) (DIN 51562)
Particle size:	
Solubility in water:	The substance / product is marketed or used in a non solid or granular form. (20 °C) fully soluble
Miscibility with water:	miscible
Molar mass:	74.13 g/mol
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.
Other Information:	Study scientifically not justified.

10. Stability and Reactivity

Reactivity

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

Oxidizing properties:

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

Reactions with water/air: Reaction with: water

Flammable gases: no

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

Strong exothermic reaction with acids.

The product is chemically stable.

Conditions to avoid

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

Incompatible materials

mineral acids

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxides

Thermal decomposition:

340 °C, 2 K/min (DSC (DIN 51007))

It is not a self-decomposable substance.

11. Toxicological information

Primary routes of exposure

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

Species: human

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

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: No substance-specific organotoxicity was observed after repeated administration to animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Genetic toxicity

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

Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Reproductive toxicity

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: Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Other Information

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

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further symptoms are possible

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 MSDS section 11 - Toxicological information.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

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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.

Photodegradation

$t_{1/2}$ (Indirect photolysis) 5.9 h; OH radical (calculated)

After evaporation or exposure to the air, the product will be rapidly degraded by photochemical processes.

Bioaccumulative potential

Bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Additional information

Sum parameter

Biochemical oxygen demand (BOD) Incubation period 5 d: 326 mg/g

13. Disposal considerations

Waste disposal of substance:

Dispose of in a RCRA-licensed facility. Do not discharge into waterways or sewer systems without proper authorization.

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.

RCRA: D001

14. Transport Information

Land transport

USDOT

Hazard class:	8
Packing group:	I
ID number:	UN 2734
Hazard label:	8, 3
Proper shipping name:	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. (contains TRIMETHYLENEDIAMINE)

Sea transport

IMDG

Hazard class:	8
Packing group:	I
ID number:	UN 2734
Hazard label:	8, 3
Marine pollutant:	NO

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