

Safety Data Sheet

Diisopropanolamine 85% sol.

Revision date : 2015/02/24
Version: 1.0

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(50047483/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Diisopropanolamine 85% sol.

Recommended use of the chemical and restriction on use

* 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(6) H(15) NO(2)
Synonyms: 1,1'-Iminobis-2-propanol in water

2. Hazards Identification

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

Classification of the product

Eye Dam./Irrit. 2A Serious eye damage/eye irritation

Label elements

Pictogram:



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Signal Word:
Warning

Hazard Statement:
H319 Causes serious eye irritation.

Precautionary Statements (Prevention):
P280 Wear eye/face protection.
P264 Wash with plenty of water and soap 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.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

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

WARNING:
Causes eye irritation.
RISK OF SERIOUS DAMAGE TO EYES.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
Prolonged or repeated contact may result in dermatitis.
INGESTION MAY CAUSE GASTRIC DISTURBANCES.
Avoid contact with the skin, eyes and clothing.
Avoid inhalation of mists/vapours.
Use with local exhaust ventilation.
Wear NIOSH-certified chemical goggles.
Wear chemical resistant protective gloves.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.

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>
110-97-4	>= 83.16 - <= 86.0 %	1,1'-iminodipropan-2-ol

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

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
110-97-4	85.0 %	1,1'-iminodipropan-2-ol
7732-18-5	15.0 %	Water

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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. If irritation develops, seek medical attention.

If in eyes:

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

If swallowed:

Rinse mouth and then drink plenty 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: Overexposure may cause: abdominal cramps, shortness of breath, coughing

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

Suitable extinguishing media:

water spray, dry powder, carbon dioxide, alcohol-resistant foam

Special hazards arising from the substance or mixture

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.

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6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate respiratory protection. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund').

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. 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.

Further information on storage conditions: Avoid all sources of ignition: heat, sparks, open flame.

Storage stability:

Storage temperature: 20 °C

Storage duration: 24 Months

May yellow after lengthy storage.

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

If stored below the limit temperature precipitation or gelatinization of product is possible. This process is reversible.

8. Exposure Controls/Personal Protection

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.

Hand protection:

Chemical resistant protective gloves, Consult with glove manufacturer for testing data.

Eye protection:

Tightly fitting safety goggles (chemical goggles).

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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:

No special measures necessary if stored and handled correctly. Avoid inhalation of vapours/mists. Wear protective clothing as necessary to prevent contact.

9. Physical and Chemical Properties

Form:	solution	
Odour:	amine-like	
Colour:	colourless	
pH value:	11.4	(100 g/l, 20 °C)
Freezing point:	< -10 °C	(1 ATM)
Boiling point:	> 100 °C	(1 ATM)
<i>Information on: Diisopropanolamine</i>		
Boiling point:	248.8 - 254.5 °C	(1,013 hPa) (other)

Flash point:	143 °C	(DIN 51758, closed cup)
Flammability:	not readily ignited	
Lower explosion limit:	0.02 %(V)	(132 °C) (air) For solids not relevant for classification and labelling.
Upper explosion limit:	0.12 %(V)	(176 °C) (air) For solids not relevant for classification and labelling.
Autoignition:	315 °C	(DIN 51794)
Vapour pressure:	< 10 mbar	(20 °C)
Density:	1.01 g/cm ³	(20 °C)
Relative density:	1.01	(20 °C)
Partitioning coefficient n-octanol/water (log Pow):	-0.79	(23 °C) (OECD Guideline 107)
Self-ignition temperature:		(DIN 51794) not self-igniting (DIN 51794) No self ignition was observed up to the specified temperature.
Thermal decomposition:	Stable up to boiling point. No exothermic decomposition within the mentioned temperature range.	
Viscosity, dynamic:	84.19 mPa.s	(60 °C)
Solubility in water:	> 1,000 g/l	(20 °C) miscible, Literature data.
Molar mass:	133.19 g/mol	
Evaporation rate:		Value can be approximated from Henry's Law Constant or vapor pressure.

10. Stability and Reactivity

Reactivity

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:

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not fire-propagating (other)

Chemical stability

Possibility of hazardous reactions

The product is chemically stable.

Conditions to avoid

Incompatible materials

No substances known that should be avoided.

Hazardous decomposition products

Decomposition products:

No hazardous decomposition products known.

Thermal decomposition:

Stable up to boiling point. No exothermic decomposition within the mentioned temperature range.

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 after a single skin contact. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely acute hazard.

Oral

Type of value: LD50

Species: rat (male/female)

Value: > 2,000 mg/kg (OECD Guideline 401)

Inhalation

Study does not need to be conducted.

Dermal

Type of value: LD50

Species: rabbit (male)

Value: 8,000 mg/kg

Assessment other acute effects

Assessment of STOT single:

The available information is not sufficient for evaluation.

Irritation / corrosion

Assessment of irritating effects: Not irritating to the skin. Irritating to eyes.

Skin

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Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Eye

Species: rabbit
Result: Irritant.
Method: OECD Guideline 405
The European Union (EU) has classified this substance with 'Irritating to eyes'.(R36).

Sensitization

Assessment of sensitization: The substance did not cause skin sensitization in humans.

Buehler test

Species: guinea pig
Result: Non-sensitizing.

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: No adverse effects were observed after repeated oral exposure in animal studies. No adverse effects were observed after repeated dermal exposure in animal studies.

Genetic toxicity

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

Carcinogenicity

Assessment of carcinogenicity: In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed. Under certain conditions the substance can form nitrosamines. Nitrosamines are carcinogenic in animal studies. Literature data.

Reproductive toxicity

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

Teratogenicity

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

Other Information

development of pulmonary edema

Symptoms of Exposure

Overexposure may cause:, abdominal cramps, shortness of breath, coughing

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.

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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. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Toxicity to fish

LC50 (96 h) 1,466 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1)
Nominal values (confirmed by concentration control analytics)

Aquatic invertebrates

EC50 (48 h) 277.7 mg/l, Daphnia magna (Directive 79/831/EEC)
Nominal concentration.

Aquatic plants

EC50 (72 h) 339 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9)
Nominal concentration. After neutralization a reduction in harmful effect can be observed.

Chronic toxicity to fish

Study scientifically not justified.

Chronic toxicity to aquatic invertebrates

Study scientifically not justified.

Assessment of terrestrial toxicity

Toxic effects have been observed in studies with terrestrial plants.

Toxicity to terrestrial plants

424 mg/kg 424 mg/kg, Lactuca sativa
Literature data.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

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

bacterium/Toxic limit concentration (17 h): 15,000 mg/l
Nominal concentration. Literature data.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

Readily biodegradable (according to OECD criteria). Literature data. Easily eliminated from water.

Elimination information

94 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (activated sludge, domestic)

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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.

Bioaccumulative potential

Bioaccumulation potential

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

Sum parameter

Biochemical oxygen demand (BOD) Incubation period 5 d:

Other ecotoxicological advice:

The ecotoxic effect of the product has not been tested. The information on this was derived from products of similar structure or composition.

13. Disposal considerations

Waste disposal of substance:

Do not discharge substance/product into sewer system. Dispose of in accordance with national, state and local regulations.

Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

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15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute;

State regulations

State RTK

MA, PA

CAS Number

110-97-4

Chemical name

1,1'-iminodipropan-2-ol

NFPA Hazard codes:

Health : 2 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 2 Flammability: 1 Physical hazard: 0

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

Eye Dam./Irrit.

2A

Serious eye damage/eye irritation

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2015/02/24

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