Safety Data Sheet
Isopropanolamine

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1. Product and Company Identification

Use: Chemical
24 Hour Emergency Response InformatioCompany n
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932, USA
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP
Molecular formula: C(3)H(9)NO
Synonyms: MONOISOPROPANOLAMINE

2. Hazards Identification

Emergency overview
DANGER:
CORROSIVE.
COMBUSTIBLE LIQUID.
HARMFUL IF SWALLOWED.
May be harmful if absorbed through skin.
Corrosive to the skin, eyes and respiratory system.
RISK OF SERIOUS DAMAGE TO EYES.
INGESTION MAY CAUSE GASTRIC DISTURBANCES.
Avoid contact with the skin, eyes and clothing.
Avoid inhalation of mists/vapours.
Use with local exhaust ventilation.
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.
Wear NIOSH-certified chemical goggles.
Wear full face shield if splashing hazard exists.
Wear chemical resistant protective gloves.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.
State of matter: liquid
Colour: colourless to yellowish
Odour: amine-like

Potential health effects

Primary routes of exposure:
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:

Of low toxicity after single ingestion. Of moderate toxicity after short-term skin contact. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely acute hazard.

Irritation / corrosion:
Corrosive! Damages skin and eyes.

Sensitization:
The substance did not cause skin sensitization in humans.

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.

Potential environmental effects

Aquatic toxicity:
Acutely harmful for aquatic organisms. Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Terrestrial toxicity:
No data available concerning terrestrial toxicity.

3. Composition / Information on Ingredients

CAS Number Content (W/W) Chemical name
78-96-6 98.0 % 1-aminopropan-2-ol

4. 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 with water while removing contaminated clothing. Remove contaminated clothing. Immediate medical attention required. Wash soiled clothing immediately.
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 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.

5. Fire-Fighting Measures

Flash point: 80 °C (DIN 51758, closed cup) Literature data.
Autoignition: 365 °C (DIN 51794)
Lower explosion limit: 1.9 %(V) (67 °C)
Upper explosion limit: 10.4 %(V) (99.5 °C)
Flammability: not readily ignited (other)
Self-ignition temperature: 365 °C (other)
not self-igniting

Suitable extinguishing media:
water spray, dry powder, carbon dioxide, foam
Hazards during fire-fighting:
No particular hazards known.
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.
Further information:
Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

6. Accidental release measures

Personal precautions:
No special precautions necessary. 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').
Cleanup:
Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Handling
General advice:
See MSDS section 10 - Stability and reactivity. See MSDS section 5 - Fire fighting measures.
Protection against fire and explosion:
See MSDS section 5 - Fire fighting measures.
Storage
General advice:
Avoid extreme heat. Keep away from sources of ignition - No smoking.
Storage incompatibility:
General advice: Segregate from acids and acid forming substances.
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.

8. Exposure Controls and 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. 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. Observe OSHA regulations for respirator use (29 CFR 1910.134).
Hand protection:
Chemical resistant protective gloves, Consult with glove manufacturer for testing data.

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:
Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact.

9. Physical and Chemical Properties

Form: liquid
Odour: amine-like
Colour: colourless to yellowish
pH value: 11.3 (10 g/l)
Melting point: 2 °C
Boiling point: 158 - 159 °C
Vapour pressure: 0.63 hPa (25 °C) (measured) Literature data.
Density: 0.962 g/cm3 (20 °C)
Relative density: 0.96 (20 °C) Literature data.
Partitioning coefficient noctanol/
water (log Pow):
-0.93 (23 °C) (OECD Guideline 107) The data
refers to the dissociated form of the
substance.
Viscosity, dynamic: 30.2 mPa.s (20 °C) Literature data.
Particle size:
The substance / product is marketed or used
in a non solid or granular form.
Solubility in water: (20 °C) miscible
Molar mass: 75.11 g/mol

10. Stability and Reactivity

Conditions to avoid:
No conditions known that should be avoided.
Substances to avoid:
strong oxidizing agents, acids
Hazardous reactions:
Strong exothermic reaction with acids.
The product is chemically stable.
Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

11. Toxicological information

Acute toxicity
Oral:
Type of value: LD50
Species: rat
Value: 2,700 mg/kg (BASF-Test)
An aqueous solution was tested.
Inhalation:
Species: rat
Value: (IRT)
Exposure time: 8 h
No mortality within the stated exposition time as shown in animal studies.
Dermal:
Type of value: LD50
Species: rabbit
Value: 1,560 mg/kg (other)
Literature data.
Irritation / corrosion
Skin:
Species: rabbit
Result: Corrosive.
Method: BASF-Test
Eye:
Species: rabbit
Result: Risk of serious damage to eyes.
Method: BASF-Test

12. Ecological Information

Fish

Acute:
DIN 38412 Part 15 static
Leuciscus idus/LC50 (96 h): > 215 - < 464 mg/l
The details of the toxic effect relate to the 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
Acute:
Directive 79/831/EEC Daphnia magna/EC50 (48 h): 108.8 mg/l
The details of the toxic effect relate to the nominal concentration. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample.
Aquatic plants
Toxicity to aquatic plants:
DIN 38412 Part 9 green algae/EC50 (72 h): 32.7 mg/l
The details of the toxic effect relate to the nominal concentration. The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample. After neutralization a reduction in harmful effect can be observed.
Microorganisms

Toxicity to microorganisms:
aerobic
activated sludge, industrial/EC10 (30 min): > 261 mg/l
The product will cause changes in the pH value of the test system. The result refers to an unneutralized sample. The details of the toxic effect relate to the nominal concentration.
Degradability / Persistence
Biological / Abiological Degradation
Test method: OECD Guideline 301 F (aerobic), activated sludge, domestic
Method of analysis: BOD of the ThOD
Degree of elimination: > 78 % (28 d)
Evaluation: Readily biodegradable (according to OECD criteria).
Literature data.
Hydrolysis
According to structural properties, hydrolysis is not expected/probable.
Bioaccumulation
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

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

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 MONOISOPROPANOLAMINE)

15. Regulatory Information

Federal Regulations
Registration status:
Chemical TSCA, US released / listed
OSHA hazard category: Combustible Liquid; Acute target organ effects reported; Corrosive to skin and/or eyes
EPCRA 311/312 (Hazard categories): Fire; Acute

16. Other Information

HMIS III rating
Health: 3 Flammability: 2 Physical hazard: 0
NFPA and HMIS use a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of zero means that the substance possesses essentially no hazard; a rating of four indicates extreme danger. Although similar, the two rating systems are intended for different purposes, and use different criteria. The NFPA system was developed to provide an on-the-spot alert to the hazards of a material, and their severity, to emergency responders. The HMIS system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.
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.
MSDS Prepared by:
BASF NA Product Regulations
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MSDS Prepared on: 2010/05/14
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END OF DATA SHEET

specifications

Purity by GC (wt %)	99.65% min.	70.00% min.
Water Content (wt %)	0.15% max.	29.75% max.
Impurities (wt %)	0.20% max.	0.25% max.