



NANJING HBL ALKYLLOL AMINES CO.,LTD.

NO. 55, EAST FANGSHUI ROAD, LUHE, NANJING, CHINA

TEL: 025-58390021 87787901 Email: info@hongbaoli.com

Product Name: Monoisopropanolamine 99%

SAFETY DATA SHEET

According to the United Nations GHS (Rev. 10, 2023)

Issue date: 10/31/2024 Revision date: 10/31/2024 Version: 1.0

SECTION 1: Identification

1.1. GHS Product identifier

Product form : Substance
Trade name : Monoisopropanolamine
Chemical name : 1-aminopropan-2-ol
CAS-No. : 78-96-6
Formula : C₃H₉NO
Product group : Raw material

1.2. Other means of identification

Other means of identification : No information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Use in water treatment. Use in cleaning agents.
Restrictions on use : No information available.

1.4. Supplier's details

NANJING HBL ALKYLLOL AMINES CO., LTD.
NO. 55, EAST FANGSHUI ROAD, LUHE 210047, NANJING, CHINA
210047
Tel: +8625 58390021
E-mail: info@hongbaoli.com

1.5. Emergency phone number

Emergency number : 0086-532-83889090 (Chinese)
0086-25-58390057 (English)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (dermal), Category 4	H312
Skin corrosion/irritation, Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Reproductive toxicity, Category 2	H361

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects : May be harmful if swallowed. Causes severe skin burns and eye damage. Suspected of damaging fertility.

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN) :



Signal word (GHS UN) :

Danger

Hazard statements (GHS UN) :

H312 - Harmful in contact with skin.

H314 - Causes severe skin burns and eye damage.

H361 - Suspected of damaging fertility.

Precautionary statements (GHS UN) :

P260 - Do not breathe dust/fume/gas/mist/vapours/spray.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P301+P317 - IF SWALLOWED: Get medical help.

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P302+P361+P354 - IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P354+P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P362+P364 - Take off contaminated clothing and wash it before

reuse.

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : No information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%	Classification according to the United Nations GHS
Monoisopropanolamine	CAS-No.: 78-96-6	≥ 99 - ≤ 100	Acute toxicity (dermal), Category 4, H312 Skin corrosion/irritation, Category 1B, H314 Serious eye damage/eye irritation, Category 1, H318 Reproductive toxicity, Category 2, H361

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable.

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

- First-aid measures general : First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.
- First-aid measures after inhalation : Immediately administer a corticosteroid from a controlled/metered dose inhaler. Keep patient calm, remove to fresh air, seek medical attention.
- First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.

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First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects : May be harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Suspected of damaging fertility. Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray, dry powder, foam, carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.

Explosion hazard : Vapours may form explosive mixture with air.

Hazardous decomposition products in case of fire : Toxic fumes may be released, such as: carbon oxides, nitrous oxides.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin, eyes and clothing. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store in a well-ventilated place. Keep cool. Store locked up. Combustible corrosive substances Segregate from acids and acid forming substances. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Temperature class: T2 (Autoignition temperature > 300 °C).
Incompatible materials	: Isocyanates, oxidizing agents, acid chlorides, acid anhydrides, acids, acid forming substances.
Packaging materials	: Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	: Safety shower. Emergency eye wash fountain with clean water. Eliminate ignition sources. Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

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Hand protection	: Protective gloves. Chemical resistant protective gloves Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time): chloroprene rubber (CR) - 0.5 mm coating thickness nitrile rubber (NBR) - 0.4 mm coating thickness butyl rubber (butyl) - 0.7 mm coating thickness fluoroelastomer (FKM) - 0.7 mm coating thickness polyvinylchloride (PVC) - 0.7 mm coating thickness Manufacturer's directions for use should be observed because of great diversity of types. Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.
Eye protection	: Tightly fitting safety goggles (cage goggles) and face shield.
Skin and body protection	: Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit.
Respiratory protection	: Respiratory protection in case of vapour/aerosol release. Gas filter for gases/vapours of organic compounds (boiling point > 65 °C)

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear and colorless liquid
Colour	: Colourless
Odour	: Ammonia odour
Odour threshold	: Not available

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Melting point	: Not available
Freezing point	: 1 °C (101.325 kPa)
Boiling point	: 159.73 °C (101.325 kPa)
Flammability	: Combustible liquid
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 80 °C (101.325 kPa)
Auto-ignition temperature	: 365 °C (101.325 kPa)
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic (calculated value) (40 °C)	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Ca. -0.93 (23 °C)
Vapour pressure	: 0.63 hPa (25 °C)
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 0.96
Relative vapour density at 20 °C	: Not available
Solubility	: Miscible
Viscosity, dynamic	: 30.2 mPa*s (20 °C)
Explosive properties	: Vapours may form explosive mixture with air
Oxidising properties	: Non oxidizing
Particle size	: Not applicable

9.2. Data relevant with regard to physical hazard classes (supplemental)

Molecular mass : 75.11 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

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The progress of reaction is exothermic. Reacts with isocyanates. Reacts with oxidizing agents. Reacts with halogenated compounds. Reacts with acid chlorides. Reacts with acids. Incompatible with acid chlorides and acid anhydrides.

10.4. Conditions to avoid

Heat, flames, sparks. Incompatible materials.

10.5. Incompatible materials

Isocyanates, oxidizing agents, acid chlorides, acid anhydrides, acids, acid forming substances.

10.6. Hazardous decomposition products

Carbon oxides, nitrous oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : May be harmful if swallowed.

Acute toxicity (dermal) : Harmful in contact with skin.

Acute toxicity (inhalation) : Not classified

Isopropanolamine (78-96-6)	
LD50 oral rat	2813 mg/kg
LD50 dermal rabbit	1851 mg/kg bodyweight
LC50 Inhalation - Rat	> 3460 mg/L/6 h

Skin corrosion/irritation : Causes severe skin burns.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met.

Carcinogenicity : Not classified

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Reproductive toxicity : Suspected of damaging fertility.

Isopropanolamine (78-96-6)	
NOAEL (rat/oral, F0/P)	300 mg/kg bw/day
NOAEL (rat/oral, F1)	> 1000 mg/kg bw/day

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Isopropanolamine (78-96-6)	
NOAEL (subchronic, oral, rat, 90 days)	100 mg/kg bodyweight/day

Aspiration hazard : Not classified

SECTION 12: Ecological information**12.1. Toxicity**

Ecology - general : Harmful to aquatic life.

Hazardous to the aquatic environment, short-term (acute) : Harmful to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Isopropanolamine (78-96-6)	
LC50 - Fish [1]	≥ 215 - ≤ 464 mg/L/96 h (Leuciscus idus)
EC50 - Crustacea [1]	108.82 mg/L/48 h (Daphnia magna)
EC50 - Algae [1]	32.3 mg/L/72 h (Desmodesmus subspicatus)
NOEC chronic fish	2.08 mg/L/35 d (Danio rerio)
NOEC chronic crustacea	≥ 10.7 mg/L/21 d (Daphnia magna)
EC10 chronic algae	14.7 mg/L/72 h (Desmodesmus subspicatus)

12.2. Persistence and degradability

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Isopropanolamine (78-96-6)

Persistence and degradability	Readily biodegradable.
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12.3. Bioaccumulative potential

Isopropanolamine (78-96-6)

Partition coefficient n-octanol/water (Log Pow)	Ca. -0.93 (23 °C)
BCF - Fish [1]	0.11

12.4. Mobility in soil

Isopropanolamine (78-96-6)

Mobility in soil	No additional information available
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12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods




Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14: Transport information

In accordance with UN RTDG / IMDG / IATA

UN RTDG	IMDG	IATA
14.1. UN number		
2735	2735	2735
14.2. UN Proper Shipping Name		

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UN RTDG	IMDG	IATA
AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine)	AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine)	Amines, liquid, corrosive, n.o.s. (Isopropanolamine)
Transport document description		
UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine), 8, III	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (Isopropanolamine), 8, III	UN 2735 Amines, liquid, corrosive, n.o.s. (Isopropanolamine), 8, III
14.3. Transport hazard class(es)		
8	8	8
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user**UN RTDG**

Special provisions (UN RTDG) : 223, 274
 Limited quantities (UN RTDG) : 5L
 Excepted quantities (UN RTDG) : E1
 Packing instruction (UN RTDG) : P001, IBC03, LP01
 Portable tank and bulk container special instructions (UN RTDG) : T7
 Portable tank and bulk container special provisions (UN RTDG) : TP1, TP28

IMDG

Special provisions (IMDG) : 223, 274
 Limited quantities (IMDG) : 5 L

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Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: A
Segregation (IMDG)	: SGG18, SG35
Properties and observations (IMDG)	: Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. Reacts violently with acids. Cause burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

14.7. Transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Isopropanolamine (78-96-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on the Canadian DSL (Domestic Substances List)

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Isopropanolamine (78-96-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Japanese Poisonous and Deleterious Substances Control Law
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

SECTION 16: Other information

Version : 1.0
Issue date : 10/31/2024
Revision date : 10/31/2024

Indication of changes:

No information available.

Abbreviations and acronyms : SDS - Safety Data Sheet
LC50 - Median lethal concentration
LD50 - Median lethal dose
EC50 - Median effective concentration
NOEC - No-Observed Effect Concentration
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : No information available.

Full text of H-statements:

H227	Combustible liquid
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Full text of H-statements:	
H303	May be harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H361	Suspected of damaging fertility
H402	Harmful to aquatic life

Safety Data Sheet (SDS), UN

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.