

SAFETY DATA SHEET

MIPA



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name **MONOISOPROPANOLAMINE**

Other means of identification

CAS Number 78-96-6
Formula C₃H₉NO
Synonyms 2-Propanol, 1-Amino-
UN-No UN2735

Recommended use of the chemical and restrictions on use

Recommended Use Additive
Uses advised against Do not use where contact with food or drinking water is possible. Avoid prolonged contact with eyes, skin, and clothing.

Details of the supplier of the safety data sheet

Supplier Address LINYI KEMELE CO., LTD
C639 Jinke Development Zone
Linyi ,China
Website: www.kmchem.com
E-Mail: sales@kemele.com

Emergency Telephone Number(s) +86-539-333 3

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin Corrosion/Irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Flammable liquids	Category 4

Label elements

Emergency Overview

Signal Word

DANGER

Hazard statements

Harmful if swallowed
Harmful in contact with skin
Causes severe skin burns and eye damage
Combustible liquid
Harmful to aquatic life with long lasting effects Harmful to aquatic life



Appearance
Colorless

Physical State
Liquid

Odor
Amine-like Ammonia

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label)
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present .
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting
In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None known

Other Information

100 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms 2-Propanol, 1-Amino-

Formula C₃H₉NO

Chemical name	CAS No.	Weight-%	North American Hazard Indicator
Mono Isopropanolamine	78-96-6	100	True

4. FIRST AID MEASURES

First Aid Measures

General Advice	Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Destroy contaminated shoes. Call a physician immediately.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician immediately.
Self-Protection of the First Aider	Use personal protective equipment as required. Avoid contact with eyes, skin and clothing. Remove all sources of ignition.

Most important symptoms and effects, both acute and delayed

Signs and Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

<u>Flammable properties</u>	Combustible liquid.
<u>Suitable Extinguishing Media</u>	Water mist may be used to cool closed containers. Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO ₂).
<u>Unsuitable Extinguishing Media</u>	No information available.
<u>Hazardous Combustion Products</u>	Thermal decomposition or combustion may produce hazardous gases and/or materials.
<u>Explosion Data</u>	Not available
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapours. In the event of fire and/or explosion do not breathe fumes. Flash back possible over considerable distance.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective

equipment as required. Avoid contact with eyes, skin and clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Remove all sources of ignition. Take precautionary measures against static discharges. Pay attention to flashback.

Environmental Precautions Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for Clean-up Evacuate personnel to safe areas. Remove all sources of ignition. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use spark-proof tools and explosion-proof equipment. Ground and bond containers when transferring material. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Use only in an area equipped with a safety shower. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with eyes, skin and clothing. Keep away from open flames, hot surfaces and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Avoid repeated exposure.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials Cadmium. Copper. Brass. Aluminum. Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Mono Isopropanolamine 78-96-6	-	-	-

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles. Face shield.

Skin and body protection Use suitable eye protection and gloves.

Respiratory Protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colorless
Physical State	Liquid
Odor	Amine-like Ammonia
Odor Threshold	Not available
Property	Values
pH	No Data Available
Melting point / Freezing point	-2 °C
Boiling point / boiling range	158 - 162 °C
Flash Point	71 °C
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	No information available
Upper flammability limit	10.4%
Lower flammability limit	1.9%
Vapor Pressure	< 1 mmHg @ 20°C
Vapor Density	2.6 g/L
Specific Gravity	0.960 g/cm ³
Water Solubility	>10 g/100mL @ 19.8°C
Solubility in other solvents	No information available
Partition coefficient: n-octanol/water	Not available
Autoignition temperature °C	335 °C
Decomposition temperature	No Data Available
Kinematic Viscosity	No information available
Dynamic Viscosity	Not available
Explosive Properties	No information available
Oxidizing Properties	No information available

Remarks • Method

Literary Reference

CC (closed cup)

Estimated

Other Information

Softening Point	No information available
Molecular Weight	75.11
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available
Corrosion characteristics	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable.
Chemical Stability	Stable under recommended storage conditions
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition. Hygroscopic. Protect from moisture.
Incompatible Materials	Cadmium. Copper. Brass. Aluminum. Acids.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO ₂). Nitrogen oxides (NO _x).
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION**Product Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Mono Isopropanolamine	= 1715 mg/kg (Rat)	= 1,640 uL/kg (Rabbit)	-

The following values are calculated based on chapter 3.1 of the GHS document .

Information on likely routes of exposure

Eyes	Corrosive. Causes burns. Redness. Pain. Avoid contact with eyes.
Skin	May be harmful by skin contact. Corrosive. Causes burns. Redness. Pain. Avoid contact with skin.
Inhalation	May be harmful by inhalation. Corrosive. Causes burns. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.
Ingestion	May be harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts. May cause nausea, vomiting, diarrhea and stomach pain.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Skin, rabbit: 500 mg/24H MLD ; Eye, rabbit: 250 ug/24H SEV
Serious eye damage/irritation	No information available.
Skin Corrosion/Irritation	No information available.
Sensitization	No information available.
Reproductive Effects	No information available.
Mutagenic Effects	No information available.
Developmental Effects	No information available.
STOT - single exposure	No information available.
STOT - Repeated Exposure	No information available.
Chronic Toxicity	Avoid repeated exposure.
Aspiration Hazard	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects Harmful to aquatic life
Harmful to aquatic life

0 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Mono Isopropanolamine 78-96-6	23: 72 h Desmodesmus subspicatus mg/L EC50	2390 - 2650: 96 h Pimephales promelas mg/L	= 27.2 mg/L EC50 Photobacterium	= 108.82 mg/L EC50 108.82: 48 h Daphnia

		LC50 flow-through	phosphoreum 5 min	magna Straus mg/L EC50
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Persistence/Degradability No information available.

Bioaccumulation/Accumulation No information available.

Mobility in Soil No information available.

Chemical name	log Pow =
Mono Isopropanolamine 78-96-6	-0.94

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods Contact waste disposal services. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT

UN-No UN2735
 Proper Shipping Name Amines, liquid, corrosive, n.o.s
 Hazard class 8
 Packing Group II
 Description UN2735, Amines, liquid, corrosive, n.o.s. (Mono Isopropanolamine), 8, PG II
 Emergency Response Guide Number 153

TDG

UN-No UN2735
 Proper Shipping Name Amines, liquid, corrosive, n.o.s
 Hazard class 8
 Packing Group II
 Description UN2735, Amines, liquid, corrosive, n.o.s. (Mono Isopropanolamine), 8, PG II

MEX

UN-No UN2735
 Proper Shipping Name Amines, liquid, corrosive, n.o.s
 Hazard class 8
 Packing Group II
 Description UN2735, Amines, liquid, corrosive, n.o.s. (Mono Isopropanolamine), 8, II

ICAO

UN-No UN2735
 Proper Shipping Name Amines, liquid, corrosive, n.o.s
 Hazard class 8
 Packing Group II
 Description UN2735, Amines, liquid, corrosive, n.o.s. (Mono Isopropanolamine), 8, PG II

IATA

UN number UN2735
 Proper Shipping Name Amines, liquid, corrosive, n.o.s

Transport hazard class(es) 8
Packing Group II
Description UN2735, Amines, liquid, corrosive, n.o.s.*(Mono Isopropanolamine),8,PG II

IMDG

UN number UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s
Transport hazard class(es) 8
Packing Group II
EmS No. F-A, S-B
Description UN2735, Amines, liquid, corrosive, n.o.s.(Mono Isopropanolamine),8,PG II

RID

UN-No UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s
Transport hazard class(es) 8
Packing Group II
Classification Code C7
Description UN2735, Amines, liquid, corrosive, n.o.s.(Mono Isopropanolamine),8,II,RID
ADR/RID-Labels 8

ADR

UN-No UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s
Hazard Class 8
Packing Group II
Classification Code C7
Description UN2735, Amines, liquid, corrosive, n.o.s.(Mono Isopropanolamine),8,II,ADR
Labels 8

ADN

Proper Shipping Name Amines, liquid, corrosive, n.o.s
Transport hazard class(es) 8
Packing Group II
Classification Code C7
Special Provisions 274
Description UN2735, Amines, liquid, corrosive, n.o.s.(Mono Isopropanolamine),8,II
Hazard label(s) 8
Limited Quantity LQ22
Equipment Requirements PP, EP

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
Canada (DSL) Complies
EU (EINECS) Complies
EU (ELINCS) Does not comply
Japan (ENCS) Complies
China (IECSC) Complies
Korea (KECL) Complies
Philippines (PICCS) Complies
Australia (AICS) Complies
Mexico INV Complies
Taiwan INV Complies

Chemical name	U.S.A. (TSCA)	Canada (DSL)	EU (EINECS)	EU (ELINCS)	
Mono Isopropanolamine	Present	Present	X	-	
Component	Japan (ENCS)	China (IECSC)	Korea (KECL)	Philippines (PICCS)	Australia (AICS)
	Present (2)-323	Present	Present	Present	Present
Chemical name		Mexico INV		Taiwan INV	
Mono Isopropanolamine		Present		Present	

78-96-6

Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

VOC content

This Product does not contain any VOCs

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

This product contains the following State Right-to-Know chemicals:

Chemical name	New Jersey	Massachusetts	Illinois	Rhode Island	Pennsylvania
Mono Isopropanolamine 78-96-6	sn 4190	Present			Present

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

*Canada***WHMIS Statement**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION**NFPA****Health 3****Flammability 2****Instability 0****Physical Hazard 0****Issuing Date**

22-May-2008

Revision Date

20-Jun-2019

Revision Summary

Not available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet