

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

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## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** 1,1'-iminodipropan-2-ol

### 1.2 Other means of identification

**Product number** -  
**Other names** Iminodipropanol; 1,1'-Imino-2-propanol;  
IMINODIPROPANOL

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Yansheng Internet Technology Co., Ltd  
**Address** 513, A3 / F, green space future center, Fengxian District,  
Shanghai, 201400, China  
**Telephone** +86-4000-6969-66

### 1.5 Emergency phone number

**Emergency phone number** +86-4000-6969-66  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

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## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Eye irritation, Category 2

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Warning  
**Hazard statement(s)** H319 Causes serious eye irritation  
**Precautionary statement(s)**  
**Prevention** P264 Wash ... thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
**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.  
**Storage** none  
**Disposal** none

### 2.3 Other hazards which do not result in classification

no data available

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
1,1'-iminodipropan-2-ol	1,1'-iminodipropan-2-ol	110-97-4	203-820-9	100%

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.

#### Following skin contact

First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again. Refer for medical attention .

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### Following ingestion

Rinse mouth. Do NOT induce vomiting. Refer for medical attention .

### 4.2 Most important symptoms/effects, acute and delayed

Vapor concentrations too low to irritate unless exposure is prolonged. Liquid will burn eyes and skin. (USCG, 1999)

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

Exposure treatment: Inhalation: if ill effects occur, remove person to fresh air, and get medical help. Ingestion: if swallowed and patient is conscious and not convulsing, promptly give milk or water, then induce vomiting; get medical help. No specific antidote known. Eye and skin: immediately flush with plenty of water for at least 15 min. For eyes, get medical help promptly. Remove, and wash contaminated clothing before reuse.

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

To fight fire use alcohol foam, carbon dioxide, /or/ dry chemical.

### 5.2 Specific hazards arising from the chemical

This compound is combustible. (NTP, 1992)

### 5.3 Special protective actions for fire-fighters

Use water spray, powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

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## SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for organic gases and particulates adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water.

## 6.2 Environmental precautions

Personal protection: filter respirator for organic gases and particulates adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water.

## 6.3 Methods and materials for containment and cleaning up

Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water (extra personal protection: A/P2 filter respirator for organic vapour and harmful dust).

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

NO open flames. Closed system, dust explosion-proof electrical equipment and lighting. Prevent deposition of dust. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### 7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants and strong acids. Dry. Keep in the dark. Well closed. Separated from strong oxidants, strong acids. Dry. Keep in the dark. Well closed.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

no data available

#### Biological limit values

no data available

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

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

#### Eye/face protection

Wear safety goggles or eye protection in combination with breathing protection if powder.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use local exhaust or breathing protection.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties and safety characteristics

#### Physical state

Solid. Waxy.

<b>Colour</b>	White.
<b>Odour</b>	no data available
<b>Melting point/freezing point</b>	44.5 - 45.5 °C.
<b>Boiling point or initial boiling point and boiling range</b>	248.8 - 254.5 °C. Atm. press.:1 013 hPa.
<b>Flammability</b>	Combustible.
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	-1°C(lit.)
<b>Auto-ignition temperature</b>	310 °C. Atm. press.:1 013 hPa.
<b>Decomposition temperature</b>	no data available
<b>pH</b>	pH of 5% aqueous solution = 11.5
<b>Kinematic viscosity</b>	1.98 cP at 45 deg C
<b>Solubility</b>	Soluble (>=10 mg/ml) (NTP, 1992)
<b>Partition coefficient n-octanol/water</b>	log Pow = -0.878. Temperature:25 °C.
<b>Vapour pressure</b>	0.002 hPa. Temperature:-5 °C.;0.08 hPa. Temperature:45 °C.
<b>Density and/or relative density</b>	0.99 g/cm <sup>3</sup> . Temperature:20 °C.
<b>Relative vapour density</b>	4.59 (NTP, 1992) (Relative to Air)
<b>Particle characteristics</b>	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Decomposes on heating and on burning. This produces toxic gases of nitrogen oxides. The solution in water is a medium strong base. Reacts with strong acids. Reacts violently with strong oxidants. This generates fire and explosion hazard.

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

Combustible when exposed to heat or flame...Dust explosion possible if in powder or granular form, mixed with air. DIISOPROPANOLAMINE is an aminoalcohol. Amines are chemical bases. They neutralize acids to form salts plus water. These acid-base reactions are exothermic. The amount of heat that is evolved per mole of amine in a neutralization is largely independent of the strength of the amine as a base. Amines may be incompatible with isocyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid halides. Flammable gaseous hydrogen is generated by amines in combination with strong reducing agents, such as hydrides. This compound may be sensitive to light and air. This compound will react with oxidizing materials. (NTP, 1992)

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Can react with oxidizing materials.

### 10.6 Hazardous decomposition products

The substance decomposes on heating and on burning producing toxic gases (nitrogen oxides).

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (male/female) - > 2 000 mg/kg bw.
- Inhalation: RD50 (calculated) - mouse (male) - ca. 3 200 mg/m<sup>3</sup> air.
- Dermal: no data available

#### **Skin corrosion/irritation**

no data available

#### **Serious eye damage/irritation**

no data available

#### **Respiratory or skin sensitization**

no data available

#### **Germ cell mutagenicity**

no data available

#### **Carcinogenicity**

no data available

#### **Reproductive toxicity**

no data available

#### **STOT-single exposure**

The substance is corrosive to the eyes, skin and respiratory tract. Inhalation of the aerosol may cause lung oedema. See Notes. The effects may be delayed. Medical observation is indicated.

#### **STOT-repeated exposure**

no data available

#### **Aspiration hazard**

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

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## **SECTION 12: Ecological information**

### **12.1 Toxicity**

- Toxicity to fish: LC50 - Danio rerio (previous name: Brachydanio rerio) - 1 466 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 277.7 mg/L - 48 h.
- Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 339 mg/L - 72 h.
- Toxicity to microorganisms: TTC - Pseudomonas putida - 15 000 mg/L - 17 h.

### **12.2 Persistence and degradability**

Diisopropanolamine achieved 39% of its theoretical oxygen demand using a sewage sludge following a 20 day incubation period(1). No biodegradation was observed at day 5 or day 10, suggesting that an acclimation period was required(1). Diisopropanolamine was classified as recalcitrant based on the results of screening studies using acclimated sewage sludge enrichment cultures(2).

### **12.3 Bioaccumulative potential**

An estimated BCF of 3 was calculated for diisopropanolamine(SRC), using a log Kow of -0.82(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### **12.4 Mobility in soil**

Batch equilibrium studies designed to evaluate the adsorption characteristics of diisopropanolamine in subsurface soils were conducted using aquifer material from three

natural gas sites in Canada as well as montmorillonite and kaolinite clay materials(1). The adsorption isotherms were non-linear with Freundlich adsorption (Kf) coefficients ranging from 3.5 to 170, with the greatest values observed in the montmorillonite clay materials(1). Since diisopropanolamine has a pKa value of 9.1(1,2) it exists primarily as a cation in solution and a strong correlation between adsorption and the cation exchange capacity (CEC) of the material tested was observed(1). It was also noted that adsorption decreased with increasing solution electrolyte concentration as this resulted in competition for cation exchange sites in the clays and soils(1). Adsorption also decreased with increasing pH since at higher pH, a smaller percentage of diisopropanolamine exists in the protonated form.

## 12.5 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

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## SECTION 15: Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
1,1'-iminodipropan-2-ol	1,1'-iminodipropan-2-ol	110-97-4	203-820-9
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

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## SECTION 16: Other information

### Information on revision

**Creation Date** July 15, 2019  
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### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore

essential. Immediate administration of an appropriate spray, by a doctor or a person authorized by him/her, should be considered.

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

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