

# SAFETY DATA SHEETS

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - Sixth revised edition

Version: 1.0

Creation Date: Feb. 6, 2024

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## 1. Identification

### 1.1 GHS Product identifier

**Product name** Isopropanolamine

### 1.2 Other means of identification

**Product number** A601950  
**Other names** 2-Propanol,1-amino-

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

**Identified uses** Used for research and development only.Flavouring Agent:  
FLAVOURING\_AGENT  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Sangon Biotech (Shanghai) Co., Ltd.  
**Address** 698 Xiangmin Road, Songjiang, Shanghai 201611, China  
**Telephone** +86-400-821-0268 / +86-800-820-1016  
**Fax** +86-400-821-0268 to 9

### 1.5 Emergency phone number

**Emergency phone number** +86-21-57072055  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

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## 2. Hazard identification

### 2.1 Classification of the substance or mixture

Skin corrosion, Category 1B

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



<b>Signal word</b>	Danger
<b>Hazard statement(s)</b>	H314 Causes severe skin burns and eye damage
<b>Precautionary statement(s)</b>	
<b>Prevention</b>	P260 Do not breathe dust/fume/gas/mist/vapours/spray.  P264 Wash ... thoroughly after handling.  P280 Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  P363 Wash contaminated clothing before reuse.  P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  P310 Immediately call a POISON CENTER/doctor/...  P321 Specific treatment (see ... on this label).  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Storage</b>	P405 Store locked up.
<b>Disposal</b>	P501 Dispose of contents/container to ...

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

no data available

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## 3. Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
1-aminopropan-2-ol	Isopropanolamine	78-96-6	201-162-7	≥98%

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## 4. First-aid measures

### 4.1 Description of necessary first-aid measures

#### General advice

Medical attention is required. Consult a doctor. Show this safety data sheet (SDS) to the doctor in attendance.

#### 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**

Rinse with plenty of water for several minutes (remove contact lenses if easily possible). Refer immediately for medical attention.

### **Following ingestion**

Rinse mouth. Give nothing to drink. Do NOT induce vomiting. Refer immediately for medical attention.

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

Vapor irritates eyes and nose. Liquid causes local injury to mouth, throat, digestive tract, skin, and eyes. (USCG, 1999)

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

no data available

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## **5. Fire-fighting measures**

### **5.1 Extinguishing media**

**Suitable extinguishing media**

ALCOHOL FOAM

### **5.2 Specific hazards arising from the chemical**

Special Hazards of Combustion Products: Irritating vapors generated when heated. (USCG, 1999)

### **5.3 Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

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## **6. Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### **6.2 Environmental precautions**

Personal protection: complete protective clothing including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### **6.3 Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## 7. Handling and storage

### 7.1 Precautions for safe handling

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 food and feedstuffs. See Chemical Dangers. Well closed. Keep in a well-ventilated room. Store in an area without drain or sewer access.

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## 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

<b>Component</b>	Isopropanolamine			
<b>CAS No.</b>	78-96-6			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Germany (AGS)</b>	2 (1)	5,8 (1)	4 (1)(2)	11,6 (1)(2)
	<b>Remarks</b>			
<b>Germany (AGS)</b>	(1) Inhalable aerosol and vapour (2) 15 minutes reference period			

### 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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

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## 9. Physical and chemical properties

<b>Physical state</b>	Liquid.
<b>Colour</b>	-
<b>Odour</b>	SLIGHT AMMONIA ODOR
<b>Melting point/ freezing point</b>	1 °C.
<b>Boiling point or initial boiling point and boiling range</b>	159.73 °C. Atm. press.:1 013 hPa.
<b>Flammability</b>	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
<b>Lower and upper explosion limit / flammability limit</b>	no data available
<b>Flash point</b>	80 °C. Atm. press.:1 013 hPa.
<b>Auto-ignition temperature</b>	365 °C. Atm. press.:1 013 hPa.
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	dynamic viscosity (in mPa s) = 30.2. Temperature:20°C.
<b>Solubility</b>	greater than or equal to 100 mg/mL at 19.78°C
<b>Partition coefficient n-octanol/water</b>	log Pow = -0.93. Temperature:23 °C.
<b>Vapour pressure</b>	0.63 hPa. Temperature:25 °C.
<b>Density and/or relative density</b>	0.96. Temperature:20 °C.
<b>Relative vapour density</b>	2.6 (Relative to Air)
<b>Particle characteristics</b>	no data available

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## 10. Stability and reactivity

### 10.1 Reactivity

On combustion, forms nitrogen oxides. Reacts violently with strong oxidants, cellulose nitrate, nitric acid and aldehydes.

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

MONOISOPROPANOLAMINE 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.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

## 10.6 Hazardous decomposition products

no data available

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## 11. Toxicological information

### Acute toxicity

- Oral: LD50 - rat (male/female) - 2 813 mg/kg bw. Remarks: The LD50 was calculated from the original ml/kg values by using the density of 0.97 g/cm<sup>3</sup>.
- Inhalation: RD50 (calculated) - mouse (male) - ca. 440 mg/m<sup>3</sup> air.
- Dermal: LD50 - rabbit - 1 851 mg/kg bw.

### 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

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

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## 12. Ecological information

### 12.1 Toxicity

- Toxicity to fish: LC50 - *Leuciscus idus* - 215 - 464 mg/L - 96 h. Remarks: Not neutralized.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - 108.82 mg/L - 48 h. Remarks: Not neutralized.
- Toxicity to algae: EC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - 32.7 mg/L - 72 h.
- Toxicity to microorganisms: EC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - 32.7 mg/L - 72 h.

## 12.2 Persistence and degradability

A 5-day theoretical BOD of 4% was observed for 1-amino-2-propanol using a non-acclimated sewage inocula and a standard BOD dilution method(1); adaptation of the sewage inocula resulted in a 5-day theoretical BOD of 43%(1). Using a sewage inocula and a BOD dilution method, 5-day, 10-day, 15-day and 20-day theoretical BODs of 5.1, 34.0, 43.4 and 46.0% were measured respectively for 1-amino-2-propanol(2). In anaerobic serum bottle degradation studies, 1-amino-2-propanol exhibited a lag period of 9 days followed by a removal rate of 22 mg/l/day(3); during the observation period, 65% of initial 1-amino-2-propanol was removed compared to 100% removal for 1-propanol(3). 1-Amino-2-propanol is considered to be amenable to anaerobic biotechnology for industrial wastewater treatment(4).

## 12.3 Bioaccumulative potential

Based upon an experimental log Kow of - 0.96(1), the BCF for 1-amino-2-propanol can be estimated to be 0.11 from a regression-derived equation(2, SRC). This BCF value suggests that 1-amino-2-propanol will not bioconcentrate significantly in aquatic organisms(SRC).

## 12.4 Mobility in soil

Based upon an experimental log Kow of -0.96(1), the Koc for 1-amino-2-propanol can be estimated to be 7.1 from a regression-derived equation(2, SRC). This BCF value suggests that 1-amino-2-propanol has very high soil mobility(3).

## 12.5 Other adverse effects

no data available

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## 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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## 14. Transport information

### 14.1 UN Number

ADR/RID: UN2735

IMDG: UN2735

IATA: UN2735

### 14.2 UN Proper Shipping Name

ADR/RID: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.

IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.

IATA: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.

### 14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

**14.4 Packing group, if applicable**

ADR/RID: II

IMDG: II

IATA: II

**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 Annex II of MARPOL 73/78 and the IBC Code**

no data available

**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-aminopropan-2-ol	Isopropanolamine	78-96-6	201-162-7
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
<b>EC Inventory</b>			Listed.
<b>United States Toxic Substances Control Act (TSCA) Inventory</b>			Listed.
<b>China Catalog of Hazardous chemicals 2015</b>			Not Listed.
<b>New Zealand Inventory of Chemicals (NZIoC)</b>			Listed.
<b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>			Listed.
<b>Vietnam National Chemical Inventory</b>			Listed.
<b>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)</b>			Listed.

**16. Other information****Information on revision****Creation Date** Feb. 6, 2024**Revision Date** Feb. 6, 2024**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/>

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