

## Chemical Safety Data Sheet MSDS / SDS

**2-ISOPROPOXYETHANOL**Revision Date:2025-05-31 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name : 2-ISOPROPOXYETHANOL  
CBnumber : CB6175300  
CAS : 109-59-1  
EINECS Number : 203-685-6  
Synonyms : 2-Isopropoxyethanol,Ethanol, 2-(1-methylethoxy)-

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

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**SECTION 2: Hazards identification****Classification of the substance or mixture**

Acute toxicity - Category 4, Dermal  
Eye irritation, Category 2  
Acute toxicity - Category 4, Inhalation

**Label elements****Pictogram(s)**

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Signal word                      Warning

**Hazard statement(s)**

H226 Flammable liquid and vapour  
H312 Harmful in contact with skin  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H332 Harmful if inhaled

**Precautionary statement(s)**

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P337+P313 IF eye irritation persists: Get medical advice/attention.

P403+P235 Store in a well-ventilated place. Keep cool.

#### **Prevention**

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

P264 Wash ... thoroughly after handling.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

#### **Response**

P302+P352 IF ON SKIN: Wash with plenty of water/...

P317 Get medical help.

P321 Specific treatment (see ... on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

#### **Storage**

none

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards**

no data available

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## SECTION 3: Composition/information on ingredients

#### **Substance**

Product name	: 2-ISOPROPOXYETHANOL
Synonyms	: 2-Isopropoxyethanol,Ethanol, 2-(1-methylethoxy)-
CAS	: 109-59-1
EC number	: 203-685-6
MF	: C5H12O2
MW	: 104.15

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## SECTION 4: First aid measures

## Description of first aid measures

### If inhaled

Fresh air, rest.

### Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

### 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. Give one or two glasses of water to drink.

## Most important symptoms and effects, both acute and delayed

May be harmful by inhalation, ingestion or skin absorption. May cause skin and eye irritation. (USCG, 1999)

## Indication of any immediate medical attention and special treatment needed

### Minimum/Potential Fatal Human Dose

3. 3= moderately toxic: probable oral lethal dose (human) 0.5-5 g/kg, between 1 oz & 1 pint (or 1 lb) for 70 kg person (150 lb). ethylene glycol alkyl (and aryl) ethers

### Absorption, Distribution and Excretion

The material may readily be absorbed through the intact skin...

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## SECTION 5: Firefighting measures

### Extinguishing media

Alcohol" foam. water may be ineffective

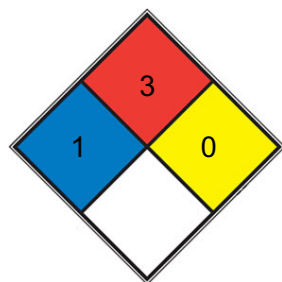
### Specific Hazards Arising from the Chemical

Special Hazards of Combustion Products: Emits toxic fumes when heated upon decomposition. (USCG, 1999)

### Advice for firefighters

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

### NFPA 704



■ HEALTH 1 Exposure would cause irritation with only minor residual injury (e.g. [acetone](#), sodium bromate, potassium chloride)

Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature

■ FIRE 3 conditions . Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, [acetone](#))

☒ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

☐ SPEC.

☐ HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Remove all ignition sources. Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible.

### Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Remove all ignition sources. Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible.

### 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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## SECTION 7: Handling and storage

### Precautions for safe handling

NO open flames, NO sparks and NO smoking. Above 44°C use a closed system, ventilation and explosion-proof electrical equipment. 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.

### Conditions for safe storage, including any incompatibilities

Cool. Fireproof. Separated from strong oxidants.SEE ETHERS. ETHERS SHOULD NOT BE STORED NEAR POWERFUL OXIDIZERS OR IN AREAS OF HIGH FIRE HAZARD. THEY SHOULD BE KEPT COOL AND THE CONTAINERS ELECTRICALLY GROUNDED TO AVOID SPARKS. ETHERS

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

TLV: 25 ppm as TWA; (skin).MAK: 43 mg/m3, 10 ppm; peak limitation category: I(2); skin absorption (H); pregnancy risk group: C

#### Biological limit values

no data available

### Exposure controls

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

elimination area.

## Individual protection measures

### Eye/face protection

Wear safety goggles.

### Skin protection

Protective gloves. Protective clothing.

### Respiratory protection

Use ventilation, local exhaust or breathing protection.

### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Liquid
Colour	Colourless.
Odour	MILD ETHEREAL ODOR
Melting point/freezing point	-74.57°C. Atm. press.:1 atm.
Boiling point or initial boiling point and boiling range	145 °C. Atm. press.:1 atm. Remarks:Experimentally derived value.;146.7 °C. Atm. press.:1 atm. Remarks:Value from EPIEB MPBPWIN v1.43 QSAR for predicting boiling point using adapted Stein and Brown method.
Flammability	Class IC Flammable Liquid: Fl.P. at or above 73°F and below 100°F.
Lower and upper explosion limit/flammability limit	1.6-13.0%(V)
Flash point	> 43 - < 45 °C. Atm. press.:101.76 kPa.
Auto-ignition temperature	240 °C. Atm. press.:1 atm.
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	kinematic viscosity (in mm <sup>2</sup> /s) = 2.7. Temperature:20°C.;kinematic viscosity (in mm <sup>2</sup> /s) = 1.84. Temperature:40°C.
Solubility	>100g/l soluble
Partition coefficient n-octanol/water	log Pow = 0.43. Temperature:20 °C.
Vapour pressure	5.99 hPa (25 °C)
Density and/or relative density	903 kg/m <sup>3</sup> . Temperature:20 °C.
Relative vapour density	3.6 (AIR= 1)
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### Reactivity

The substance can presumably form explosive peroxides. Reacts violently with strong oxidants.

### Chemical stability

VOLATILE

### Possibility of hazardous reactions

MODERATE; CAN REACT WITH OXIDIZING MATERIALSETHYLENE GLYCOL ISOPROPYL ETHER acts both as an alcohol and ether. May react violently with strong oxidizing agents. May generate flammable and/or toxic gases with alkali metals, nitrides, and other strong reducing agents. May initiate the polymerization of isocyanates and epoxides.

### Conditions to avoid

no data available

### Incompatible materials

Oxidizers.

### Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (male) - 3 089 mg/kg bw. Remarks:Results for fasted animals.
- Inhalation: NOAEL: Reduction on testis weight - rat (male) - > 3 500 ppm.
- Dermal: LD50 - rabbit (male) - 1 337 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

Result:Negative

Metabolic activation: with and without metabolic activation

Method: Guidelines for Screening Mutagenicity Testing of Chemicals (Chemical Substances Control Law of Japan) and OECD Test Guideline 473

Test system: Chinese hamster lung (CHL/IU) cells

Test Type: Chromosome aberration test in vitro

Result:Negative

Metabolic activation: with and without metabolic activation

Method: Guidelines for Screening Mutagenicity Testing of Chemicals (Chemical Substances Control Law of Japan) and OECD Test Guideline  
Chemical Book

471

Test system: Salmonella typhimurium TA100, TA1535, TA98, TA1537, Escherichia coli WP2 uvrA

Test Type: Ames test

### **Carcinogenicity**

no data available

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

The substance is irritating to the eyes. The substance is mildly irritating to the skin and respiratory tract.

### **STOT-repeated exposure**

The substance may have effects on the blood. This may result in anaemia.

### **Aspiration hazard**

A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.

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## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: LC50 - Oryzias latipes - > 100 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: LC50 - Daphnia magna - > 970 mg/L - 48 h.

Toxicity to algae: EC50 - 440 mg/L - 96 h.

Toxicity to microorganisms: EC10 - Pseudomonas putida - 4 600 mg/L - 16 h.

### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **Other adverse effects**

no data available

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## **SECTION 13: Disposal considerations**

### **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

### **UN Number**

ADR/RID: UN3271 (For reference only, please check.)

IMDG: UN3271 (For reference only, please check.)

IATA: UN3271 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: ETHERS, N.O.S. (For reference only, please check.)

IMDG: ETHERS, N.O.S. (For reference only, please check.)

IATA: ETHERS, N.O.S. (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

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## SECTION 15: Regulatory information

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



#### **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.

#### **PICCS**

Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.

#### **Korea Existing Chemicals List (KECL)**

Listed.

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## **SECTION 16: Other information**

### **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?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=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>

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