

## Chemical Safety Data Sheet MSDS / SDS

## ISOPROPYLLITHIUM

Revision Date:2026-03-21 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : ISOPROPYLLITHIUM  
CBnumber : CB8259532  
CAS : 1888-75-1  
EINECS Number : 217-561-4  
Synonyms : 2-Lithiopropane;2-Propyllithium

## 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

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continuerinsing.

## Hazard statements

H224 Extremely flammable liquid and vapour  
H304 May be fatal if swallowed and enters airways

H315 Causes skin irritation  
H318 Causes serious eye damage  
H336 May cause drowsiness or dizziness  
H411 Toxic to aquatic life with long lasting effects

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## SECTION 3: Composition/information on ingredients

### Substance

Product name : ISOPROPYLLITHIUM  
Synonyms : 2-Lithiopropane;2-Propyllithium  
CAS : 1888-75-1  
EC number : 217-561-4  
MF : C3H7Li  
MW : 50.03

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## SECTION 4: First aid measures

### General advice

Show this material safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air. Call in physician.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

### If swallowed

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

### **Suitable extinguishing media**

Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

### **Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

### **Specific hazards during fire fighting**

Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

### **Hazardous combustion products**

Carbon oxides Lithium oxides

### **Specific extinguishing methods**

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

### **Special protective equipment for fire-fighters**

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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## SECTION 6: Accidental release measures

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

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### **Environmental precautions**

Do not let product enter drains. Risk of explosion.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

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## SECTION 7: Handling and storage

### **Handling**

#### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

#### **Avoidance of contact**

Forms shock-sensitive mixtures with certain other materials. Iron and iron salts. Heavy metals phosphorous Sulfur compounds Oxygen Nickel

Do not store near acids. Metals Chlorinated solvents

#### **Storage**

##### **Further information on storage conditions**

Tightly closed. Keep away from heat and sources of ignition.

##### **Storage class**

4.3, Hazardous materials, which set free flammable gases upon contact with water

##### **Recommended storage**

2 - 8 °C temperature

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## SECTION 8: Exposure controls/personal protection

#### **control parameter**

##### **Hazard composition and occupational exposure limits**

Does not contain substances with occupational exposure limits.

##### **Engineering measures**

No data available

#### **Personal protective equipment**

##### **Respiratory protection**

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

##### **Recommended Filter type**

Filter type AX

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

##### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Tightly fitting safety goggles

##### **Skin and body protection**

Flame retardant antistatic protective clothing.

##### **Hand protection**

##### **Remarks**

required

##### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

liquid

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#### **Color**

No data available

#### **Odor**

No data available

#### **Odor Threshold**

No data available

#### **pH**

No data available

#### **Melting point/ range**

No data available

#### **Boiling point/boiling range**

35 - 36 °C

#### **Flash point**

-35 °C

Method: closed cup

#### **Evaporation rate**

No data available

#### **Flammability (solid, gas)**

No data available

#### **Flammability (liquids)**

No data available

#### **Burning rate**

No data available

#### **Upper explosion limit / Upper flammability limit**

No data available

#### **Lower explosion limit / Lower flammability limit**

No data available

#### **Vapor pressure**

No data available

**Relative vapor density**

No data available

**Relative density**

0.632 g/mL at 25 °C

**Density**

0.632 g/mL (25 °C)

**Water solubility**

No data available

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

Not classified as explosive.

**Oxidizing properties**

none

**Molecular weight**

50.03 g/mol

**Particle characteristics Particle size**

No data available

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SECTION 10: Stability and reactivity

## Reactivity

Vapors may form explosive mixture with air.

## Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## Possibility of hazardous reactions

No data available

## Conditions to avoid

Warming.

## Incompatible materials

Forms shock-sensitive mixtures with certain other materials. Iron and iron salts. Heavy metals phosphorous Sulfur compounds Oxygen Nickel

Do not store near acids. Metals Chlorinated solvents

## Hazardous decomposition products

In the event of fire: see section 5

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# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Mixture Acute toxicity

Oral: No data available

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Symptoms: Possible symptoms:., mucosal irritations

Dermal: No data available

### Skin corrosion/irritation

Remarks: Mixture causes skin irritation.

### Serious eye damage/eye irritation

Remarks: Mixture causes serious eye damage.

### Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

### Germ cell mutagenicity

Classified based on available data. For more details, see section 2

### Carcinogenicity

Classified based on available data. For more details, see section 2

### Reproductive toxicity

Classified based on available data. For more details, see section 2

### Specific target organ toxicity - single exposure

Mixture may cause drowsiness or dizziness.

### Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

## Aspiration hazard

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

## 11.2 Additional Information

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Headache,

Nausea, Large doses of lithium ion have caused dizziness and prostration, and can cause kidney damage if sodium intake is limited.

Dehydration, weight loss, dermatological effects, and thyroid disturbances have been reported. Central nervous system effects that include slurred speech, blurred vision, sensory loss, ataxia, and convulsions may occur. Diarrhea, vomiting, and neuromuscular effects such as tremor, clonus, and hyperactive reflexes may occur as a result of repeated exposure to lithium ion.

Contact with eyes can cause: Redness, Blurred vision, Provokes tears., Prolonged or repeated contact with skin may cause: defatting, Dermatitis, Central nervous system depression, Damage to the lungs.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

### Components pentane

#### Acute toxicity

LD50 Oral - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 25.3 mg/l - vapor (OECD Test Guideline 403)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: cyclopentane

Dermal: No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h (OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation (OECD Test Guideline 405)

#### Respiratory or skin sensitization

Buehler Test - Guinea pig

Result: negative (OECD Test Guideline 406)

#### Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Method: Mutagenicity (micronucleus test)

Species: Rat - male and female - Bone marrow

Result: negative

#### Carcinogenicity

Classified based on available data. For more details, see section 2

#### Reproductive toxicity

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

May cause drowsiness or dizziness. - Central nervous system

#### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

#### **Aspiration hazard**

May be fatal if swallowed and enters airways. Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

#### **isopropyl lithium**

##### **Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

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

Remarks: No data available

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

Remarks: No data available

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

Classified based on available data. For more details, see section 2

##### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

##### **Carcinogenicity**

Classified based on available data. For more details, see section 2

##### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2

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## SECTION 12: Ecological information

### **Ecotoxicity**

#### **Components:**

##### **pentane:**

##### **Toxicity to fish**

LC50 (Oncorhynchus mykiss (rainbow trout)): 4.26 mg/l End point: mortality Exposure time: 96 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes

##### **Toxicity to daphnia and other aquatic invertebrates**

EC50 (Daphnia magna (Water flea)): 2.7 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Remarks: (ECHA)

### **Toxicity to algae/aquatic plants**

ErC50 (Selenastrum capricornutum (green algae)): 10.7 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes NOEC (Selenastrum capricornutum (green algae)): 7.51 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes

### **Ecotoxicology Assessment**

#### **Chronic aquatic toxicity**

Toxic to aquatic life with long lasting effects.

#### **isopropylithium:**

#### **Toxicity to fish**

Remarks: No data available

### **Persistence and degradability**

#### **Components:**

#### **pentane:**

#### **Biodegradability**

aerobic Inoculum: activated sludge Concentration: 60 mg/l Result: Readily biodegradable. Biodegradation: 87 % Exposure time: 28 d Method: OECD Test Guideline 301F GLP: yes

#### **Bioaccumulative potential**

#### **Components:**

#### **pentane:**

#### **Bioaccumulation**

Remarks: No data available

#### **Partition coefficient: noctanol/water**

log Pow: 3.45 (25 °C) pH: 7 Remarks: Bioaccumulation is not expected.

#### **Mobility in soil**

No data available

#### **Other adverse effects**

#### **Components:**

#### **pentane:**

#### **Additional ecological information**

Avoid release to the environment. Do not empty into drains.

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## **SECTION 13: Disposal considerations**

## Disposal methods

### Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## SECTION 14: Transport information

### International Regulations

#### IATA-DGR

UN/ID No. : UN 3399

Proper shipping name : Organometallic substance, liquid, water-reactive, flammable (pentane)

Class : 4.3

Subsidiary risk : 3

Packing group : I

Labels : Division 4.3 - Substances which in contact with water emit flammable gases, Class 3 - Flammable liquids

Packing instruction (cargo aircraft) : 494

Packing instruction (passenger aircraft) : Not permitted for transport

#### IMDG-Code

UN number : UN 3399

Proper shipping name : ORGANOMETALLIC SUBSTANCE, LIQUID, WATERREACTIVE, FLAMMABLE (pentane)

Class : 4.3

Subsidiary risk : 3

Packing group : I

Labels : 4.3 (3)

EmS Code : F-G, S-N

Marine pollutant : yes

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National regulation GB 6944/12268

UN number : UN 3399

Proper shipping name : ORGANOMETALLIC SUBSTANCE, LIQUID, WATERREACTIVE, FLAMMABLE (pentane)

Class : 4.3

Subsidiary risk : 3

Packing group : I

Labels : 4.3 (3)

#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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## SECTION 15: Regulatory information

### National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

No. / Code Chemical name / Category Threshold quantity

W5.1 Flammable liquids 10 t

Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals

Not listed

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## SECTION 16: Other information

### Full text of other abbreviations

#### ACGIH

USA. ACGIH Threshold Limit Values (TLV)

#### GBZ 2.1-2007

Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

#### ACGIH / TWA

8-hour, time-weighted average

#### GBZ 2.1-2007 / PC-TWA

Permissible concentration - time weighted average

GBZ 2.1-2007 / PC-STEL AIC - Australian Invent Transport by Land of Bra bw - Body weight; CMR Standard of the German List (Canada); ECx - Conc associated with x% respo Chemical Substances (Jap response; ERG - Emerge GLP - Good Laboratory P cer; IATA - International Construction and Equipm Half maximal inhibitory c tion; IECSC - Inventory o tional Maritime Dangerou Industrial Safety and H Standardization; KECl - K tration to 50 % of a test (Median Lethal Dose); MA lution from Ships; n.o.s. No Observed (Adverse) E fect Level; NOELR - No Norm; NTP - National Toxi icals; OECD - Organizatio fice of Chemical Safety a and Toxic substance; PIC stances; (Q)SAR - (Quant (EC) No 1907/2006 of th Registration, Evaluation, Accelerating Decompositi Chemical Substance Inve Thailand Existing Chemical States); UN - United Nat Transport of Dangerous WHMIS - Workplace Hazar

Permissible concentration - short term exposure limit ry of Industrial Chemicals

ANTT - National Agency for il

ASTM - American Society for the Testing of Materials

- Carcinogen, Mutagen or Reproductive Toxicant

DIN nstitute for Standardisation

DSL - Domestic Substances ntration associated with x% response

ELx - Loading rate se

EmS - Emergency Schedule

ENCS - Existing and New n)

ErCx - Concentration associated with x% growth rate cy Response Guide

GHS - Globally Harmonized System

actice

IARC - International Agency for Research on Canir Transport Association

IBC - International Code for the nt of Ships carrying Dangerous Chemicals in Bulk

IC50 ncentration

ICAO - International Civil Aviation Organiza- Existing Chemical Substances in China

IMDG - Interna- Goods

IMO - International Maritime Organization

ISHL alth Law (Japan)

ISO - International Organisation for rea Existing Chemicals Inventory

LC50 - Lethal Concenopulation

LD50 - Lethal Dose to 50% of a test population POL - International Convention for the Prevention of Pol- Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC fect Concentration

NO(A)EL - No Observed (Adverse) Efbserveable Effect Loading Rate

NOM - Official Mexican ology Program

NZIoC - New Zealand Inventory of Chemfor Economic Co-operation and Development

OPPTS - Ofd Pollution Prevention

PBT - Persistent, Bioaccumulative S - Philippines Inventory of Chemicals and Chemical Subtative) Structure Activity Relationship

REACH - Regulation European Parliament and of the Council concerning the uthorisation and Restriction of Chemicals

SADT - Selfn Temperature

SDS - Safety Data Sheet

TCSI - Taiwan tory

TDG - Transportation of Dangerous Goods

TECI s Inventory

TSCA - Toxic Substances Control Act (United ons)

UNRTDG - United Nations Recommendations on the oods

vPvB - Very Persistent and Very Bioaccumulative

ous Materials Information System

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.