

## Chemical Safety Data Sheet MSDS / SDS

## Phenyllithium

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

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

## Product identifier

Product name : Phenyllithium  
CBnumber : CB4853905  
CAS : 591-51-5  
EINECS Number : 209-720-1  
Synonyms : PHLI;PHENYLITHIUM

## 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.  
P273 Avoid release to the environment.  
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.

## Hazard statements

H226 Flammable liquid and vapour  
H314 Causes severe skin burns and eye damage  
H335 May cause respiratory irritation  
H412 Harmful to aquatic life with long lasting effects

## SECTION 3: Composition/information on ingredients

### Substance

Product name	: Phenyllithium
Synonyms	: PHLI;PHENYLLITHIUM
CAS	: 591-51-5
EC number	: 209-720-1
MF	: C <sub>6</sub> H <sub>5</sub> Li
MW	: 84.04

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. 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. Call a physician immediately.

#### 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: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### 4.2 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

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

No data available

### 4.4 Notes to physician

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Dry powder Sand

#### Unsuitable extinguishing media

Water Foam

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Caution! in contact with water product releases:

Hydrogen

Vapors are heavier than air and may spread along floors.

May not get in touch with: Water

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

## 5.3 Advice for firefighters

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

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

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# SECTION 6: Accidental release measures

## 6.1 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.

For personal protection see section 8.

## 6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

## 6.3 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 (e.g.

Chemizorb®). Dispose of properly. Clean up affected area.

## 6.4 Reference to other sections

For disposal see section 13.

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# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

### Advice on safe handling

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

Keep workplace dry. Do not allow product to come into contact with water.

## Advice on protection against fire and explosion

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

## Hygiene measures

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

For precautions see section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Never allow product to get in contact with water during storage.

Recommended storage temperature see product label.

### Storage class

Storage class (TRGS 510): 3: Flammable liquids

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

['Component', 'CAS-No.', 'Value', 'Control parameters', 'Basis']	['biphenyl', '92-52-4', 'PC-TWA', '1.5 mg/m <sup>3</sup> ', 'Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.']	['benzene', '71-43-2', 'PC-TWA', '3 mg/m <sup>3</sup> ', 'Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.']	['Remarks', 'G1 - Carcinogenic to humans', 'Skin', 'None', 'None']	['PC-STEL', '6 mg/m <sup>3</sup> ', 'Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.']	['G1 - Carcinogenic to humans', 'Skin', 'None', 'None']
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#### Biological occupational exposure limits

['Component', 'CAS-No.', 'Parameters', 'Value', 'Biological specimen', 'Basis']	['71-43-2', 'S- phenylmerc apturic acid (S-PMA)', '47micro moles per millimole creatinine', 'Urine', 'China. Biological Occupational Exposure Indices']	['Remarks', 'After shift', 'None, None, None']	['S- phenylmerc apturic acid (S-PMA)', '100µg/g creatinine', 'Urine', 'China. Biological Occupational Exposure Indices']
['', 't,t-muonic acid (tt-MA)', '2.4Millimoles per mole creatinine', 'Urine', 'China. Biological Occupational Exposure Indices']	['', 'After shift', 'None, None, None']	['', 't,t-muonic acid (tt-MA)', '3mg/g creatinine', 'Urine', 'China. Biological Occupational Exposure Indices']	['', 'After shift', 'None, None, None']

After shift

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

### 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 protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-

approved gloves (e.g. KCL GmbH, D-36124 Eichenzell,

Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 10 min

Material tested: Butoject® (KCL 898)

### Body Protection

Flame retardant antistatic protective clothing.

### 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.

### Control of environmental exposure

Do not let product enter drains. Risk of explosion.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

a) Physical state	liquid
b) Color	dark brown
c) Odor	No data available
d) Melting point/freezing point	No data available
e) Initial boiling point and boiling range	140-143 °C
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	25 °C - Information refers to the main ingredient.
i) Autoignition temperature	The substance or mixture is not classified as pyrophoric.
j) Decomposition temperature	No data available
k) pH	No data available
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	at 20 °C Risk of violent reaction.
n) Partition coefficient n-octanol/water	No data available
o) Vapor pressure	No data available
p) Density	0.85 g/cm <sup>3</sup> at 20 °C

Relative density	0.835 g/mL at 25 °C
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	Not classified as explosive.
t) Oxidizing properties	none
Solubility	Miscible with ether and hydrocarbons.

## 9.2 Other safety information

No data available

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# SECTION 10: Stability and reactivity

## 10.1 Chemical stability

sensitive to moisture

## 10.2 Possibility of hazardous reactions

Exothermic reaction with:

Oxidizing agents

Strong acids

Risk of explosion with: nitrogen trichloride

Risk of ignition or formation of inflammable gases or vapours with:

Alcohols nitrogen oxides

Oxidizing agents carbon dioxide combustible substances

Ether

Oxygen

Acids

## 10.3 Conditions to avoid

Heating.

Moisture.

## 10.4 Incompatible materials

No data available

## 10.5 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

Acute toxicity estimate Oral - > 5,000 mg/kg (Calculation method)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute toxicity estimate Inhalation - 4 h - 28.09 mg/l - vapor(Calculation method)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Acute toxicity estimate Dermal - > 5,000 mg/kg (Calculation method)

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

Remarks: Mixture causes burns.

Remarks: Mixture causes burns.

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

Remarks: Mixture causes serious eye damage.

Risk of blindness!

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

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

#### **Germ cell mutagenicity**

Possible mutagen

Possible mutagen

#### **Carcinogenicity**

Possible human carcinogen

Possible human carcinogen

#### **Reproductive toxicity**

Suspected of damaging the unborn child.

Suspected of damaging fertility.

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

Mixture may cause respiratory irritation.

Mixture may cause respiratory irritation.

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

Mixture may cause damage to organs through prolonged or repeated exposure.

- Blood

Mixture may cause damage to organs through prolonged or repeated exposure.

#### **Aspiration hazard**

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

### **11.2 Additional Information**

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

#### **Components 1,1'-Oxybis(butane)**

##### **Acute toxicity**

LD50 Oral - Rat - male - 7,400 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - male - 4 h - 21.6 mg/l - vapor (OECD Test Guideline 403)

LD50 Dermal - Rabbit - male - 7,741 mg/kg (OECD Test Guideline 402)

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

Skin - Rabbit

Result: Mild skin irritation - 4 h (OECD Test Guideline 404)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

Remarks: Drying-out effect resulting in rough and chapped skin.

Dermatitis

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

Eyes - Rabbit

Result: Moderate eye irritation (OECD Test Guideline 405)

Remarks: (Regulation (EC) No 1272/2008, Annex VI)

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

Open epicutaneous test - Guinea pig

Result: negative (OECD Test Guideline 406)

#### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: negative

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

Test system: Human lymphocytes

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 respiratory irritation.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

#### **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

#### **phenyllithium Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

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

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

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

Remarks: 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**

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

### **biphenyl Acute toxicity**

LD50 Oral - Rat - 2,140 mg/kg

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

Remarks: (RTECS)

Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:., damage of respiratory tract

LD50 Dermal - Rabbit - > 5,010 mg/kg

Remarks: (RTECS)

### **Skin corrosion/irritation**

Skin - Rabbit

Result: Severe irritations - 24 h (Draize Test)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

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

Remarks: Causes serious eye irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

### **Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: negative (OECD Test Guideline 406)

### **Germ cell mutagenicity**

Test Type: Ames test

Result: negative

Remarks: (HSDB)

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: positive

Method: OECD Test Guideline 474

Species: Mouse - male and female

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**

Inhalation - May cause respiratory irritation. - Respiratory system

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Acute oral toxicity - Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath,

Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract

#### **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

#### **Hydrocarbons, C6, n-alkanes, isoalkanes, cyclics, n-hexane rich Acute toxicity**

LD50 Oral - Rat - male and female - 16,750 mg/kg (OECD Test Guideline 401)

Symptoms: Nausea

LC50 Inhalation - Rat - male - 259.35 mg/l - vapor (OECD Test Guideline 403)

Symptoms: Irritation symptoms in the respiratory tract., Inhalation may lead to the formation of oedemas in the respiratory tract.

LD50 Dermal - Rabbit - 3,350 mg/kg (OECD Test Guideline 402)

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

Remarks: Causes skin irritation.

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

Remarks: Possible damages:

Risk of corneal clouding.

#### **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**

Suspected of damaging fertility.

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

May cause drowsiness or dizziness. - Central nervous system

Acute oral toxicity - Nausea

Acute inhalation toxicity - Irritation symptoms in the respiratory tract., Inhalation may lead to the formation of oedemas in the respiratory tract.

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

May cause damage to organs through prolonged or repeated exposure.

#### **Aspiration hazard**

Aspiration hazard, Aspiration may cause pulmonary edema and pneumonitis.

#### **benzene Acute toxicity**

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

Symptoms: Nausea

LD50 Oral - Rat - male and female - 3,002 mg/kg (OECD Test Guideline 401)

Symptoms: Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis.

Symptoms: mucosal irritations

LD50 Dermal - Rabbit - 13,630 mg/kg

Remarks: (IUCLID)

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

Skin - Rabbit

Result: irritating (OECD Test Guideline 404)

Remarks: (ECHA)

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

Eyes - Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

Remarks: (IUCLID)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

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

Maximization Test - Guinea pig

Result: negative (OECD Test Guideline 406)

#### **Germ cell mutagenicity**

May cause genetic defects.

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male - Bone marrow

Result: positive

#### **Carcinogenicity**

May cause cancer. Positive evidence from human epidemiological studies.

#### **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

Acute oral toxicity - Nausea

Acute oral toxicity - Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis.

Acute inhalation toxicity - mucosal irritations

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

Causes damage to organs through prolonged or repeated exposure.

- Blood

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

#### **Aspiration hazard**

Aspiration may cause pulmonary edema and pneumonitis.

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## SECTION 12: Ecological information

## 12.1 Toxicity

### Mixture

No data available

## 12.2 Persistence and degradability

No data available

## 12.3 Bioaccumulative potential

No data available

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Endocrine disrupting properties

No data available

## 12.7 Other adverse effects

Discharge into the environment must be avoided.

### Components 1,1'-Oxybis(butane)

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 32.3 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia semi-static test EC50 - Daphnia magna (Water flea) - > 18.76 and other aquatic mg/l - 48 h invertebrates (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - ca. 19.1 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 1,000 mg/l - 30 min (OECD Test Guideline 209)

Remarks: (above the solubility limit in the test medium)

### phenyllithium

No data available

### biphenyl

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 3 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia flow-through test EC50 - Daphnia magna (Water flea) - 0.36 and other aquatic mg/l - 48 h invertebrates (US-EPA)

Toxicity to flow-through test NOEC - Oncorhynchus mykiss (rainbow trout) fish(Chronic toxicity) - 0.229 mg/l - 87 d (OECD Test Guideline 210)

Toxicity to daphnia Remarks: No data available and other aquatic invertebrates(Chronic toxicity)

### Hydrocarbons, C6, n-alkanes, isoalkanes, cyclics, n-hexane rich

No data available

### benzene

Toxicity to fish semi-static test LC50 - Oryzias latipes (Orange-red killifish) - > 100 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia semi-static test EC50 - Daphnia magna (Water flea) - > 1,000 and other aquatic mg/l - 48 h invertebrates (OECD Test Guideline 202) semi-static test NOEC - Daphnia magna (Water flea) - > 1,000 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - > 1,000 mg/l - 72 h (OECD Test Guideline 201) static test NOEC - Pseudokirchneriella subcapitata (green algae) - >= 1,000 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

Toxicity to flow-through test NOEC - Pimephales promelas (fathead fish(Chronic toxicity) minnow) - 0.8 mg/l - 32 d

Remarks: (ECHA)

Toxicity to daphnia semi-static test LC50 - Daphnia magna (Water flea) - > 100 and other aquatic mg/l - 21 d invertebrates(Chronic (OECD Test Guideline 211) toxicity)

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product

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

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2920

IMDG: 2920

IATA-DGR: 2920

### 14.2 UN proper shipping name

ADR/RID: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (phenyllithium)

IMDG: CORROSIVE LIQUID, FLAMMABLE, N.O.S. (phenyllithium)

IATA-DGR: Corrosive liquid, flammable, n.o.s. (phenyllithium)

### 14.3 Transport hazard class(es)

ADR/RID: 8 (3)

IMDG: 8 (3)

IATA-DGR: 8 (3)

### 14.4 Packaging group

ADR/RID: II

IMDG: II

IATA-DGR: II

### 14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA-DGR: no

### 14.6 Special precautions for user

Based on chemical properties, choose appropriate tools and conditions of transport.

Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

## 14.7 Incompatible materials

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# SECTION 15: Regulatory information

## 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Listed

Measures on the Environmental Administration of New Chemical Substances Registration

Registration/Notification number : B1A222210730 B1A222224913

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

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# SECTION 16: Other information

## Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

### 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.