

## Chemical Safety Data Sheet MSDS / SDS

## LITHIUM POLYSILICATE

Revision Date:2026-06-27 Revision Number:1

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

## Product identifier

Product name : LITHIUM POLYSILICATE  
CBnumber : CB8155151  
CAS : 12627-14-4  
EINECS Number : 235-730-0  
Synonyms : Lithium Polysilicate,Lithium polysilicate solution 20 wt. % in H2O

## 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

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

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

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

H318 Causes serious eye damage

H335 May cause respiratory irritation

## SECTION 3: Composition/information on ingredients

## Substance

|              |                                                                                    |
|--------------|------------------------------------------------------------------------------------|
| Product name | : LITHIUM POLYSILICATE                                                             |
| Synonyms     | : Lithium Polysilicate, Lithium polysilicate solution 20 wt. % in H <sub>2</sub> O |
| CAS          | : 12627-14-4                                                                       |
| EC number    | : 235-730-0                                                                        |
| MF           | : Li <sub>2</sub> O <sub>3</sub> Si                                                |
| MW           | : 89.9657                                                                          |

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Show this safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air.

#### 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: immediately make victim drink water (two glasses at most). Consult a physician.

### 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

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

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

### 5.2 Special hazards arising from the substance or mixture

Lithium oxides silicon oxides

Not combustible.

Mixture with combustible ingredients.

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

Ambient fire may liberate hazardous vapours.

### 5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

### 5.4 Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. 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 vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. 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.

### 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 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

For precautions see section 2.2.

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

#### Storage conditions

Tightly closed.

#### Storage class

Storage class (TRGS 510): 12: Non Combustible Liquids

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

### 8.2 Exposure controls

#### 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

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: (KCL 740 / Aldrich Z677272, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

##### Body Protection

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.

Recommended Filter type: Filter type ABEK

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.

#### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

## Information on basic physicochemical properties

|                                                 |                                                                                  |
|-------------------------------------------------|----------------------------------------------------------------------------------|
| a) Physical state                               | liquid                                                                           |
| b) Color                                        | colourless                                                                       |
| c) Odor                                         | No data available                                                                |
| d) Melting point/freezing point                 | No data available                                                                |
| e) Initial boiling point and boiling range      | No data available                                                                |
| f) Flammability (solid, gas)                    | No data available                                                                |
| g) Upper/lower flammability or explosive limits | No data available                                                                |
| h) Flash point                                  | Not applicable                                                                   |
| i) Autoignition temperature                     | Not applicable                                                                   |
| j) Decomposition temperature                    | No data available                                                                |
| k) pH                                           | No data available                                                                |
| l) Viscosity                                    | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| m) Water solubility                             | at 20 °C soluble                                                                 |
| n) Partition coefficient n-octanol/water        | No data available                                                                |
| o) Vapor pressure                               | No data available                                                                |
| p) Density                                      | 1,16 g/cm <sup>3</sup> at 25 °C                                                  |
| Relative density                                | 1.16 g/mL at 25 °C                                                               |
| q) Relative vapour density                      | No data available                                                                |
| r) Particle characteristics                     | No data available                                                                |
| s) Explosive properties                         | Not classified as explosive.                                                     |
| t) Oxidizing properties                         | none                                                                             |

## 9.2 Other safety information

No data available

# SECTION 10: Stability and reactivity

## 10.1 Reactivity

No data available

## 10.2 Chemical stability

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

## 10.3 Possibility of hazardous reactions

Violent reactions possible with:

The generally known reaction partners of water.

## 10.4 Conditions to avoid

no information available

## 10.5 Incompatible materials

Strong oxidizing agents

## 10.6 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: Possible symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages: damage of respiratory tract

Dermal: No data available

### Skin corrosion/irritation

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

### 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 respiratory irritation.

### 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

## 11.2 Additional Information

### Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

### Components Silicic acid, lithium salt

#### Acute toxicity

LD50 Oral - Rat - female - 2.500 mg/kg (OECD Test Guideline 423)

Inhalation: No data available

Dermal: No data available

#### Skin corrosion/irritation

Remarks: No data available

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes.

(OECD Test Guideline 405)

#### Respiratory or skin sensitization

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

#### Germ cell mutagenicity

Test Type: Ames test

Test system: S. typhimurium

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

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

### 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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and  
Chemical Book

very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission

Delegated regulation (EU) 2017/2100 or Commission

Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

No data available

### Components Silicic acid, lithium salt

Toxicity to fish static test LC50 - *Poecilia reticulata* (guppy) - > 100 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia Immobilization EC50 - *Daphnia magna* (Water flea) - > 800 and other aquatic mg/l - 48 h invertebrates (OECD Test Guideline 202)

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# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

No data available

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# SECTION 14: Transport information

## 14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

## 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

## 14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

## 14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

## 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

## 14.6 Special precautions for user

No data available

Further information: Not classified as dangerous in the meaning of transport regulations.

## 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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# SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

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# SECTION 16: Other information

## Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road

AIRC - Australian Inventory of Industrial Chemicals

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN - Standard of the German Institute for Standardisation

DSL - Domestic Substances List (Canada)

EC<sub>x</sub> - Concentration associated with x% response

EL<sub>x</sub> - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and New Chemical Substances (Japan)

ErC<sub>x</sub> - Concentration associated with x% growth rate response

GHS - Globally Harmonised System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC50 - Half maximal inhibitory concentration  
 ICAO - International Civil Aviation Organization  
 IECSC - Inventory of Existing Chemical Substances in China  
 IMDG - International Maritime Dangerous Goods  
 IMO - International Maritime Organisation  
 ISHL - Industrial Safety and Health Law (Japan)  
 ISO - International Organisation for Standardisation  
 KECI - Korea Existing Chemicals Inventory  
 LC50 - Lethal Concentration to 50 % of a test population  
 LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)  
 MARPOL - International Convention for the Prevention of Pollution from Ships  
 n.o.s. - Not Otherwise Specified  
 NO(A)EC - No Observed (Adverse) Effect Concentration  
 NO(A)EL - No Observed (Adverse) Effect Level  
 NOELR - No Observable Effect Loading Rate  
 NZIoC - New Zealand Inventory of Chemicals  
 OECD - Organisation for Economic Co-operation and Development  
 OPPTS - Office of Chemical Safety and Pollution Prevention  
 PBT - Persistent, Bioaccumulative and Toxic substance  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 (Q)SAR - (Quantitative) Structure Activity Relationship  
 REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
 RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
 SADT - Self-Accelerating Decomposition Temperature  
 SDS - Safety Data Sheet  
 TCSI - Taiwan Chemical Substance Inventory  
 TECI - Thailand Existing Chemicals Inventory  
 TSCA - Toxic Substances Control Act (United States)  
 UN - United Nations  
 UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods  
 vPvB - Very Persistent and Very Bioaccumulative

**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.