

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet SIL6469.5

Date of issue: 21/10/2015 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Mixture
Physical state	: Liquid
Product name	: LITHIUM POLYSILICATE, 20% in water
Product code	: SIL6469.5
Formula	: Li ₂ O11Si ₅
Synonyms	: DILITHIUM OXOSILICATE; SILICIC ACID, LITHIUM SALT
Chemical family	: SILICATE SOLUTION

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**GELEST, INC.**11 East Steel Road
Morrisville, PA 19067**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com**GELEST INC.**Fritz-Klatte-Strasse 8
65933 Frankfurt**Germany**

T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM

info@gelestde.com - www.gelestde.com**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) :

: Danger

Hazardous ingredients :

: Ammonium hydroxide; Lithium polysilicate

Hazard statements (CLP) :

: H315 - Causes skin irritation.

H318 - Causes serious eye damage.

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands thoroughly after handling.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	73 - 85	Not classified
Lithium polysilicate	(CAS-No.) 12627-14-4 (EC-No.) 235-730-0	14 - 25	Eye Dam. 1, H318
Ammonium hydroxide	(CAS-No.) 1336-21-6	1 - 2	Skin Corr. 1B, H314 STOT SE 3, H335 Aquatic Acute 1, H400

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of water/.... Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : May be harmful if swallowed.

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

Note: General treatment protocols for caustic (alkali) exposure apply.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Not combustible.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : None known.

Explosion hazard : None known.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Avoid all eye and skin contact and do not breathe vapour and mist.

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Wear protective equipment as described in Section 8.
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Use only in well ventilated areas.
Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container tightly closed.
Incompatible materials : Acids. Aluminum metal.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ammonium hydroxide (1336-21-6)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m ³)	17 mg/m ³
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	25 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (mg/m ³)	24 mg/m ³
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	25 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	35 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

Personal protective equipment:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles or face shield. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear solution.
Molecular mass	: 330.3 g/mol
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
Refractive index	: No additional information available
pH	: No data available
pH solution	: 11 - 12
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: < 0 °C
Boiling point	: 100 °C - initial (water)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: < 1 mm Hg 20°C
Relative vapour density at 20 °C	: No data available
Relative density	: 1.16
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Acids. Aluminum metal.

10.6. Hazardous decomposition products

Carbon dioxide. Lithium hydroxide. Silicon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Water (7732-18-5)

LD50 oral rat

> 90 ml/kg

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

Lithium polysilicate (12627-14-4)

LD50 oral rat	16540 mg/kg
ATE CLP (oral)	16540 mg/kg bodyweight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: May be harmful if swallowed.
Reason for classification	: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

Ammonium hydroxide (1336-21-6)

LC50 fish 1	0.53 mg/l
EC50 Daphnia 1	0.66 mg/l
LC50 fish 2	0.75 - 3.4 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
----------------------------------	------------------

IMDG

Transport hazard class(es) (IMDG)	: Not applicable
-----------------------------------	------------------

IATA

Transport hazard class(es) (IATA)	: Not applicable
-----------------------------------	------------------

ADN

Transport hazard class(es) (ADN)	: Not applicable
----------------------------------	------------------

RID

Transport hazard class(es) (RID)	: Not applicable
----------------------------------	------------------

14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

© 2019 Gelest Inc. Morrisville, PA 19067