



Enabling Your Technology

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet SIL6469.5

Date of issue: 10/21/2015

Version: 1.0

SECTION 1: Identification**1.1. Identification**

Product name	: LITHIUM POLYSILICATE, 20% in water
Product code	: SIL6469.5
Product form	: Mixture
Physical state	: Liquid
Formula	: Li ₂ O ₁₁ Si ₅
Synonyms	: DILITHIUM OXOSILICATE; SILICIC ACID, LITHIUM SALT
Chemical family	: SILICATE SOLUTION

1.2. Recommended use and restrictions on use

Recommended use	: Chemical intermediate
-----------------	-------------------------

1.3. Supplier**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**1.4. Emergency telephone number**

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

SECTION 2: Hazard(s) identification**2.1. Classification of the substance or mixture****GHS-US classification**

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 1

Hazardous to the aquatic environment - Acute Hazard Category 3

Full text of H statements : see section 16

H315 Causes skin irritation

H318 Causes serious eye damage

H402 Harmful to aquatic life

2.2. GHS Label elements, including precautionary statements**GHS US labeling**

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: H315 - Causes skin irritation
H318 - Causes serious eye damage
H402 - Harmful to aquatic life

Precautionary statements (GHS US)

: P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands thoroughly after handling.
P273 - Avoid release to the environment.
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 doctor
P321 - Specific treatment (see first aid instructions on this label)
P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose of contents/container to licensed waste disposal facility.**2.3. Hazards not otherwise classified (HNOC)**

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients**3.1. Substances**

Not applicable

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Water	(CAS-No.) 7732-18-5	73 - 85	Not classified
Lithium polysilicate	(CAS-No.) 12627-14-4	14 - 25	Eye Dam. 1, H318
Ammonium hydroxide	(CAS-No.) 1336-21-6	1 - 2	Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400

Full text of hazard classes and 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 victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Wash with plenty of soap and 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 (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. Immediate medical attention and special treatment, if necessary

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

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Not combustible.
- Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

- Fire hazard : None known.
- Explosion hazard : None known.

5.3. Special protective equipment and precautions for fire-fighters

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

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

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

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 vapor 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

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:

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
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
Refractive index	: No data available
pH	: No data available
pH solution	: 11 - 12
Relative evaporation rate (butyl acetate=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

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: < 1 mm Hg 20°C
Relative vapor 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
Oxidizing properties	: No data available
Explosion 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 (12627-14-4)

LD50 oral rat	16540 mg/kg
ATE US (oral)	16540 mg/kg body weight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified

Specific target organ toxicity – 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

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life.

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. Other adverse effects

Effect on the ozone layer : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal 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

Not regulated for transport.

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ammonium hydroxide (1336-21-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Lithium polysilicate (12627-14-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification

Uncontrolled product according to WHMIS classification criteria

Ammonium hydroxide (1336-21-6)

Listed on the Canadian DSL (Domestic Substances List)

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

Lithium polysilicate (12627-14-4)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Water (7732-18-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Ammonium hydroxide (1336-21-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Lithium polysilicate (12627-14-4)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Water (7732-18-5)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Ammonium hydroxide (1336-21-6)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Lithium polysilicate (12627-14-4)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases::

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
H402	Harmful to aquatic life

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.

Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur
Flammability : 0 Minimal Hazard - Materials that will not burn
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

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

Print date: 04/10/2019

EN (English US)

SDS ID: SIL6469.5

6/7

LITHIUM POLYSILICATE, 20% in water

Safety Data Sheet

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

