



# Liquid Silicon

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Revision date: 02/12/2020 Supersedes: 05/08/2019 Version: 3.1

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Liquid Silicon  
Type of product : Fertilisers  
Product group : Trade product

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

##### 1.2.1. Relevant identified uses

Intended for general public  
Main use category : Consumer use  
Use of the substance/mixture : Fertilisers

##### 1.2.2. Uses advised against

Restrictions on use : Not applicable

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer

Growth Technology Limited  
Great Western Way  
TA2 6BX Taunton - UK  
T +44 (0)1823 325291  
[info@growthtechnology.com](mailto:info@growthtechnology.com) - [www.growthtechnology.com](http://www.growthtechnology.com)

#### 1.4. Emergency telephone number

Emergency number : +44 (0)1823 325291  
office hours only:  
Monday - Friday  
0800 - 1700 (GMT/UTC)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0344 892 0111	
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	

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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

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 :

Potassium silicate

Hazard statements (CLP) :

H318 - Causes serious eye damage.

Precautionary statements (CLP) :

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P280 - Wear eye protection.

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.

#### 2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

Bioaccumulation is not expected to occur

### 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]
Potassium silicate	(CAS-No.) 1312-76-1 (EC-No.) 215-199-1 (REACH-no) 01-2119456888-17	≥ 5 – < 10	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-statements: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general :

If you feel unwell, seek medical advice (show the label where possible). First aid personnel should wear appropriate protective equipment during any rescue.

First-aid measures after inhalation :

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact :

Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower.

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- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical advice.
- First-aid measures after ingestion : Rinse mouth. Get medical advice/attention if you feel unwell.

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

- Symptoms/effects : Causes serious eye damage.
- Symptoms/effects after inhalation : Inhalation of liquid or overexposure to vapours may cause coughing.
- Symptoms/effects after skin contact : None under normal conditions.
- Symptoms/effects after eye contact : Causes serious eye damage.
- Symptoms/effects after ingestion : Ingestion may cause nausea and vomiting.

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

Treat symptomatically. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing agent suitable for surrounding fire. Dry chemical, CO<sub>2</sub>, or water spray or regular foam.

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

- Explosion hazard : Contact with metals could evolve flammable hydrogen gas. Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity.
- Hazardous decomposition products in case of fire : None to our knowledge.

### 5.3. Advice for firefighters

- Firefighting instructions : Do not allow run-off from fire-fighting to enter drains or water courses.
- Protection during firefighting : Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Keep out of reach of children. Do not handle until all safety precautions have been read and understood.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Concerning personal protective equipment to use, see section 8.
- Emergency procedures : Avoid contact with eyes. Evacuate area. Ventilate area.

#### 6.1.2. For emergency responders

- Protective equipment : Concerning personal protective equipment to use, see section 8.
- Emergency procedures : Avoid contact with eyes. Evacuate unnecessary personnel. Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

- For containment : Stop leak without risks if possible. Cover spill with non combustible material, e.g.: sand, earth, vermiculite. For a large spillage, contain the spillage by bunding.
- Methods for cleaning up : Take up liquid spill into absorbent material. Shovel or sweep up and put in a closed container for disposal. Clean contaminated surfaces with an excess of water.
- Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

SECTION 8. SECTION 11. SECTION 13.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	: Avoid contact with eyes. Wear eye or face protection.
Hygiene measures	: Take off immediately all contaminated clothing and wash it before reuse. Always wash hands after handling the product.

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

Technical measures	: Keep out of reach of children.
Storage conditions	: Keep only in original container. Keep cool. Protect from sunlight. Protect from frost.
Incompatible products	: Strong acids.
Incompatible materials	: Hazardous reactions may occur on contact with certain chemicals. (Refer to the list of incompatible materials section 10: "Stability-Reactivity").
Storage temperature	: 6 – 30 °C

#### 7.3. Specific end use(s)

Fertilisers.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

<b>Potassium silicate (1312-76-1)</b>	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	1.49 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	5.61 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	0.74 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.38 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	0.74 mg/kg bodyweight/day
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	7.5 mg/l
PNEC aqua (marine water)	1 mg/l
PNEC aqua (intermittent, freshwater)	7.5 mg/l
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	348 mg/l

#### 8.2. Exposure controls

##### Appropriate engineering controls:

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

##### Personal protective equipment:

Always wash hands after handling the product. Wear eye or face protection.

##### Materials for protective clothing:

Not required for normal conditions of use

##### Hand protection:

Not required for normal conditions of use

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### Eye protection:

EN 166. Chemical goggles or safety glasses

### Skin and body protection:

Not required for normal conditions of use

### Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation

### Thermal hazard protection:

Not required for normal conditions of use.

### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, colorless liquid.
Colour	: Colourless.
Odour	: odourless.
Odour threshold	: Not applicable as product has a barely detectable odour
pH	: Strongly alkaline
Relative evaporation rate (butylacetate=1)	: Not determined
Melting point	: Not applicable (aqueous liquid)
Freezing point	: ≈ 0 °C
Boiling point	: ≈ 100 °C
Flash point	: Not applicable (aqueous non combustible product)
Auto-ignition temperature	: Not applicable (aqueous non combustible product)
Decomposition temperature	: Not determined for product as chemical composition does not present hazard.
Flammability (solid, gas)	: Not applicable (aqueous liquid)
Vapour pressure	: Not determined, product is non volatile and therefore not expected to pose a hazard.
Vapour pressure at 50 °C	: Not determined, product is non volatile and therefore not expected to pose a hazard.
Relative vapour density at 20 °C	: Not determined, product is non volatile at 20°C and therefore not expected to pose a hazard.
Relative density	: 1.129
Density	: 1129 kg/m <sup>3</sup>
Solubility	: Miscible (in all proportions) with : water.
Partition coefficient n-octanol/water (Log Pow)	: Not determined as product is inorganic
Partition coefficient n-octanol/water (Log Kow)	: Not determined as product is inorganic
Viscosity, kinematic	: No data available
Viscosity, dynamic	: Not determined as product has low viscosity and this property is not considered relevant for usage or hazard potential of product
Explosive properties	: Not expected to be a fire/explosion hazard under normal conditions of use.
Oxidising properties	: Does not meet the criteria for classification as oxidising.
Explosive limits	: Not determined as not considered to pose an explosion hazard under normal conditions of usage or storage Not applicable (aqueous non combustible product)

### 9.2. Other information

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions of use.

#### 10.3. Possibility of hazardous reactions

May react violently with acids.

#### 10.4. Conditions to avoid

Keep out of direct sunlight. Protect from freezing.

#### 10.5. Incompatible materials

Zinc and its alloys. Aluminium and its alloys.

#### 10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### Potassium silicate (1312-76-1)

LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
LD50 dermal rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 2.06 mg/l air Animal: rat, Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)  
pH: Strongly alkaline  
Serious eye damage/irritation : Causes serious eye damage.  
pH: Strongly alkaline  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified

#### Potassium silicate (1312-76-1)

NOAEL (animal/female, F0/P)	> 159 mg/kg bodyweight Animal: rat, Animal sex: female
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STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

#### Potassium silicate (1312-76-1)

NOAEL (oral, rat, 90 days)	227 – 237 mg/kg bodyweight/day
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Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Not classified

#### Potassium silicate (1312-76-1)

EC50 72h algae (1)	207 mg/l Test organisms (species): <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i> )
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#### 12.2. Persistence and degradability

##### Liquid Silicon

Persistence and degradability	Not established.
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#### Potassium silicate (1312-76-1)

Persistence and degradability	Not readily biodegradable.
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#### 12.3. Bioaccumulative potential

##### Liquid Silicon

Partition coefficient n-octanol/water (Log Pow)	Not determined as product is inorganic
Partition coefficient n-octanol/water (Log Kow)	Not determined as product is inorganic
Bioaccumulative potential	Bioaccumulation is not expected to occur.

#### Potassium silicate (1312-76-1)

Bioaccumulative potential	Low bioaccumulation potential.
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#### 12.4. Mobility in soil

##### Liquid Silicon

Ecology - soil	Expected to be highly mobile in soil.
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#### 12.5. Results of PBT and vPvB assessment

##### Liquid Silicon

Bioaccumulation is not expected to occur

#### 12.6. Other adverse effects

Other adverse effects : May cause pH changes in aqueous ecological systems.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Prevent entry to sewers and public waters.

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Product/Packaging disposal recommendations : a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

#### Inland waterway transport

Not applicable

#### Rail transport

Not applicable

### 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.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

##### 15.1.2. National regulations

No additional information available

#### 15.2. Chemical safety assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product



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### SECTION 16: Other information

Abbreviations and acronyms:	
SDS	Safety Data Sheet
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
DNEL	Derived-No Effect Level
PNEC	Predicted No-Effect Concentration
CAS-No.	Chemical Abstract Service number
EC-No.	European Community number
EN	European Standard
OEL	Occupational Exposure Limit
ATE	Acute Toxicity Estimate
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
EC50	Median effective concentration
DMEL	Derived Minimal Effect level
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative
IOELV	Indicative Occupational Exposure Limit Value

Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Eye Dam. 1	H318	Calculation method

SDS EU (REACH Annex II)

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.