

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

1.1. Product identifier

Product name : Sodium Silicate liquid

EC no : 215-687-4

CAS No. : 1344-09-8

REACH registration No. : 01-2119448725-31-XXXX

Synonyms : Silicic acid, sodium salt, sodium hydroxy(oxo)silanolate

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

1.2.1. Relevant identified uses

Use of the substance/preparation:

Substance used as such, in formulation or in formulation of products such as:

- Fillers
- Coatings
- Polymers
- Adhesives
- Sealants
- Paper
- Glass
- Ceramics
- Steel industries

1.2.2. Uses advised against

- None

Full text of use descriptors: see section 16.

1.3. Details of the supplier of the safety data sheet

CTM Potters Supplies

Unit 7 & 8, Broomhouse Lane Ind Est

Doncaster

South Yorkshire

DN12 1EQ

Tel - 01709 770801

Email - doncaster@ctmpotterssupplies.co.uk

1.4. Emergency telephone number

NCES - 01865 407333 - out of hours 111

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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]

Hazard classes/categories	Hazard Statements
Skin Irrit.2 Eye Dam. 1	H315: Causes skin irritation H318: Causes serious eye damage

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Hazard classes/categories	Hazard Statements
Xi: Irritant Eye Dam. 1	R38: Irritating to skin R41: Risk of serious damage to eye

Full text of R-phrases: see section 16

Hazards summary

Alkaline solution.

Causes skin irritation and serious eye damage..

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

Hazard pictograms (CLP):

GHS



Signal word (CLP): Danger

Hazard statements (CLP) :

H315: Causes skin irritation.

H318: Causes serious eye damage.

Precautionary statements (CLP) :

P262: Do not get in eyes, on skin or on clothing

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.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Not applicable

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SECTION 3: Composition/information on ingredients.

3.1. Substances

Ingredient(s)	EC-No	CAS-No.	Weight %	Classification (1272/2008/EC)	Reach Registration Number
Sodium Silicate (molar ratio>1.6; ≤2.6)	215-687-4	1344-09-8	20 - 60	Skin Irrit.2 - H315 Eye Dam. 1 - H318	01-2119448725-31-XXXX
Water	231-791-2	7732-18-5	40 - 80	Not classified	N/A

Full text of R- & H- phrases: see section 16

SECTION 4: First aid measures.

4.1. Description of first aid measures

Inhalation: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Ingestion: Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Skin contact: Wash skin with soap and water. Get medical attention if irritation persists after washing.

Eye contact: Immediately flush eyes with eyewash solution or water (for 10 minutes). Seek an oculist.

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

Inhalation: May cause coughing

Ingestion: May cause indigestion

Skin contact: Causes skin irritation.

Eye contact: causes serious eye damage.

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

Speed in removal of material is of prime importance.

Remove soiled clothing immediately.

SECTION 5: Firefighting measures.

5.1. Extinguishing media

Suitable extinguishing media: No specific extinguishing media is needed.

Unsuitable extinguishing media: None

5.2. Special hazards arising from the substance or mixture

Fire hazard: Not flammable.

Explosion hazard: No explosive properties known.

Reactivity: Stable under normal conditions of handling and storage.

5.3. Advice for firefighters

Protection during firefighting: No specific fire fighting procedures given.

SECTION 6: Accidental release measures.

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Keep public away from danger area. See section 8.2.

6.1.1. For non-emergency personnel

Avoid contact with skin and eyes.

Danger of slipping on spilled product.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Remove with liquid-absorbing material for example sand.

Remove last traces by diluting with plenty of (warm) water.

6.4. Reference to other sections

See section 8 and 13 for more information.

SECTION 7: Handling and storage.

7.1. Precautions for safe handling

Precautions for safe handling:

Avoid contact with eyes, skin and clothing.

Wear protective equipment.

Eye wash facilities should be readily available

Wash hands plentifully and other exposed areas with water after handling. Remove contaminated clothing and shoes. Wash clothing before re-using.

Packagings: Even those that have been emptied, will retain product residue. Always obey safety warnings and handle empty packages as if they were full. Avoid all contact with this substance.

Hygiene measures: When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Remove contaminated clothing and shoes.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in dry, cool, well-ventilated area. Keep away from food, drink and animal feeding stuffs.

Keep packaging/storage vessel closed. Protect from freezing. Keep away from Acids.

7.3. Specific end use(s)

The identified uses for this product are detailed in section 1.2

SECTION 8: Exposure controls/personal protection.

8.1. Control parameters

No particular measures required.

8.2. Exposure controls

Appropriate engineering controls: Use as far as possible in a closed system. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Local exhaust and general ventilation must be adequate to meet exposure standards. Please refer to the annex (exposure scenarios).

Hand protection: Use gloves resistant to chemical products corresponding to EN 374:3. Take advice from the gloves' manufacturer.

Eye protection: Wear safety glasses with side shields according EN 166.

Skin and body protection: Wear closed protective clothing.

Respiratory protection: Use respiratory protection mask according to EN 140 or EN 405 with filter type P3 according to EN 143:2000 or FFP3 according to EN 149:2001.

Environmental exposure controls: Avoid release to the environment.

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SECTION 9: Physical and chemical; properties.

Physical state	Viscous liquid.
Colour	Colourless to translucent.
Odour	odourless.
Odour threshold	Not applicable
pH	1% solutions ranges from 11 to 13
Relative evaporation rate (butylacetate=1)	No data available
Melting point/Freezing point	Ranges from 0 to -12°C
Boiling point	±100°C
Flash point	Not applicable
Self ignition temperature	Not applicable
Decomposition temperature	Not applicable
Flammability (solid, gas)	Not flammable
Vapour pressure (mm Hg)	Similar to H ₂ O
Relative vapour density at 20 °C	No data available
Density	1.30 – 1.60 kg/l
Solubility (water)	Soluble
Log Pow	Negligible.
Log Kow	Not applicable
Viscosity	Ranges from 10 to 10,000 mPas
Viscosity, dynamic	Not applicable
Explosive properties	Not applicable
Oxidising properties	Not explosive.
Explosive limits	Non oxidizing material according to EC criteria.

9.1. Other information

No additional information available

SECTION 10: Stability and reactivity.

10.1. Reactivity

See section 10.3.

10.2. Chemical stability

Stable under normal conditions of handling and storage.

10.3. Possibility of hazardous reactions

Aqueous solutions will react with aluminium, zinc, tin, copper and their alloys evolving hydrogen gas which can form and explosive mixture with air.

Exothermic reaction if in contact with acids.

10.4. Conditions to avoid

Avoid contact in concentrated form with acids.

10.5. Incompatible materials

Avoid contact with aluminium, zinc, tin, copper and their alloys..

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information.

11.1. Information on toxicological effects

Acute toxicity	The hazard of sodium silicates, by all routes, comes from its alkalinity. Ingestion: Oral LD50 (rat): 3,400 mg/kg bw. Inhalation: In case of inhalation, irritation of the respiratory system can be expected. Inhalation LC50 (rat) >2,060g/m ³ Skin contact: Irritation. Dermal LD50 (rat) >5,000mg/kg bw. Eye contact: Causes serious eye damage, unless treated immediately.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitisation	Not sensitising (LLNA).
Germ cell mutagenicity	No evidence of genotoxicity. In vitro.in vivo negative.
Carcinogenicity	No structural alerts.
Reproductive toxicity	Effects on fertility: NOAEL (rat) >159mg/kg bw/d Developmental toxicity: NOAEL (mouse) >200mg/kg bw/d.
STOT – single exposure	No data.
STOT – repeated exposure	No data.
Aspiration hazard	Not classified.

SECTION 12: Ecological information.

12.1. Toxicity

Acute fish toxicity (Brachydanio rerio): LC50 (96 hour): 1,108mg/l.

Acute invertebrates toxicity (Daphnia magna): EC50 (48 hour): 1,700mg/l.

Algae/cyanobacteria (Scenedesmus subspicatus):EC50 (72 hour, biomass): 207mg/L, EC560 (72 hour, growth rate): >345.4mg/L.

12.2. Persistence and degradability

Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica. They combine with ions like Ca, Mg, Fe, Al and others to end up as insoluble compounds similar to constituents of natural soils.

12.3. Bioaccumulative potential

Inorganic. The substance has no potential for bioaccumulation.

12.4. Mobility in soil

Not applicable.

12.5. Results of PBT and vPvB assessment

Not classified as PBT or vPvB

SECTION 13: Disposal considerations.

13.1. Waste treatment methods

Waste treatment methods: Dispose of this material and residues in accordance with local authority requirements. Neutralisation prior to disposal is advisory.

Additional information: Empty packaging can have residues or dusts and are subject to proper waste disposal, as above. Preliminary cleaning with water is advisory.

Ecology - waste materials: EWC (European Waste Catalogue) Number: 06 02 99.

SECTION 14: Transport information.

14.1. UN number

The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2. UN proper shipping name

Not classified for transportation.

14.3. Transport hazard class(es)

Not classified for transportation.

14.4. Packing group

Not classified for transportation.

14.5. Environmental hazards

Other information: No environmental hazards known with this product.

14.6. Special precautions for user

Not classified for transportation.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information.

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

TCSA inventory status: Reported/included.

AICS inventory status: Reported/included.

DSL/NDSL inventory status: Reported/included.

EU Legislation:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulations (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

15.2. Chemical Safety Assessment.

A chemical safety assessment has been conducted. The results are summarized in annex. The annex covers workplace and consumer exposure scenario's.

SECTION 16: Other information.

Full text of R-phrases referred to under sections 2 and 3

R38: Irritating to skin

R41: Risk of serious damage to eyes

Full text of S-phrases referred to under sections 2 and 3

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

Full text of H-phrases referred to under sections 2 and 3

H315: Causes skin irritation.

H318: Causes serious eye damage.

Full text of P-phrases referred to under sections 2 and 3

P262: Do not get in eyes, on skin, or on clothing.

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.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Abbreviations and acronyms:

ADN: European Agreement concerning international carriage of Dangerous goods by Inland waterways

ADR: European Agreement concerning international carriage of Dangerous goods by Road

AF: Assessment factor

BCF: Bioconcentration factor

Bw: Body weight

CAS: Chemical Abstracts Service

CLP: Classification, labelling, packaging

CSR: Chemical Safety Report

DMEL: Derived maximum effect level

DNEL: Derivative No effect Level

EC: European Community

ELV: Emission limit values

EN: European Norm

EUH: European Hazard Statement

EWC: European Waste catalogue

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods

LC50: Median lethal concentration

LD50: Median lethal dose

NOAEL: No-observed-adverse-effect-level

NOEC: No observed effect concentration

NOEL: No observed effect level

OEL: Operator exposure level

PBT: Persistent, bioaccumulative, Toxic

PEC: Predicted effect level

PNEC: Predicted No effect Concentration

REACH: Registration, evaluation and autorisation of chemicals

RID: Regulations concerning the international carriage of dangerous goods by rail

STEL: Short Term Exposure Limit

TWA: Time weighted average

vPvB: Very persistent, very bioaccumulative.

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