



Material Safety Data Sheet Sodium Silicate

Edition: 25/10/2010

1.1) Identification of substance/preparation and of the company undertaking

Material	Sodium Silicate Liquid
Synonyms	Waterglass, Silicic acid, sodium salt, sodium hydroxy(oxo)silanolate
CAS No	1344-09-8
EC no	215-687-4
REACH registration No.	01-2119448725-31-XXXX
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1.2) 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

Uses advised against

- None

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

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

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.

3) Composition

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

4) 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.

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

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

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.

Indication of any immediate medical attention and special treatment needed

Speed in removal of material is of prime importance.

Remove soiled clothing immediately.

- 5) Fire Fighting**
- Extinguishing media Those suitable for surrounding fire conditions.
- Special exposure hazards The product is non-flammable. Contact with certain metals (aluminium, zinc and tin) liberates highly flammable hydrogen gas, which may form an explosive mixture with air.
- Protective personal equipment May generate toxic fumes in a fire - self contained breathing apparatus and full body protective clothing.
- 6) Accidental Release**
- Leaks & Spills Contain spillage. Scoop into a suitable container. Wipe up any excess. If any enters drain, dilute as much as possible.
- Personal protective equipment Wear goggles and respiratory protective equipment. Eye baths should be available.
- 7) Handling/Storage**
- 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.
- Storage 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.
- 8) 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 to 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.
- 9) Physical/Chemical Properties**
- Appearance Viscous liquid
- Odour Odourless
- Flash point (0C) N/A
- Flammability N/A
- Explosive properties N/A
- Oxidising properties N/A
- Specific gravity 1-3
- pH value 7 > 11
- Melting point (0C) 980 °C

10) Stability/Reactivity

Chemical stability	The material is stable under normal conditions.
Conditions/materials to avoid	Avoid exposure to atmospheric draughts and low Temperatures. Avoid contact with strong acids. Acid will cause the liquid to gel. Absorbs carbon dioxide from the air. Ignites and maintains combustion in fluorine. Contact with wood will cause discoloration. Solutions will react with new surfaces of aluminium, zinc, tin and their alloy will liberate hazardous decomposition fumes.
Hazardous decomposition products	Contact with aluminium, brass, tin, zinc will produce highly flammable and explosive H ₂ gas.
Hazardous polymerization products	None

11) Toxicological Info

Acute toxicology	Liquid and mist cause severe irritation and corrosion to skin, eyes, respiratory and digestive tracts. There is little danger of clod solution causing acute damage to the skin. Hot solutions may cause chemical burns.
Health effects	Prolonged contact may cause dryness and reddening of the skin. Corrosive to eyes and may cause corneal damage. Inhalation may cause pulmonary oedema. Ingestion causes system dehydration and nausea. Ingestion of large amounts may result in sever abdominal pains, vomiting, diarrhoea, convulsions and collapse.

12) Ecological Information

Ecotoxicity	Increase in pH 10 or more is lethal to aquatic life.
Persistence	No evidence of bio-accumulation or tainting of seafood.

13) Disposal Consideration

Dispose in accordance with current waste disposal regulations (for UK – Control of Pollution (Special Waste) Regulations 1980). Landfill is the most appropriate method.

14) Transport Information

UN/SI No.	Not classified
UN Class	Not classified
Packing Group	Not classified
Road UK	Not classified
ADR	Not classified
Sea IMO	Not classified
Air ICAO	Not classified

15) Regulatory Information

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.

UK Occupational exposures limits

Refer to HSE Guidance note EH40

16) Other Information

This information is for health and safety guidance only, is not a material specification, and does not constitute the user's own assessment of suitability, and workplace risk as required by any other Health and Safety legislation. It is accurate to the best of our knowledge and belief, but since the conditions of handling and use are outside our control we make no guarantee of results, and assume no liability for damages incurred by use of this material.