

Safety Data Sheet - Sodium Waterglass (Comp. A)



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Revision No: 3.2
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1. IDENTIFICATION OF THE SUBSTANCE /MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier	Sodium Waterglass Comp. A	
1.2 Relevant identified uses of the substance or mixture and uses advised against	"A" component for water glass - polyisocyanate based two-component synthetic resin. The synthetic resin (components "A"+"B") is used for the lining of sewer pipes and manholes. The application has to be carried out under professional, industrial conditions by persons having proper previous training.	
1.3 Details of the supplier of the safety data sheet	Company	Source One Environmental Ltd Endeavour Works Valley Park Wombwell, Barnsley S73 0UW
	Email	contact@s1e.co.uk
	Website	www.s1e.co.uk
	Telephone	+44 (0) 1226 397 015
	Telefax	+44 (0) 1226 447 300
1.4 Emergency telephone number	Medical emergency information in case of intoxication Emergency telephone number	+44 (0) 845 408 9575

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)

Hazard Classes / Categories	Hazard Statements
Skin Irrit. 2	H315
Eye Dam. 1	H318

2. HAZARDS IDENTIFICATION - CONT'D.

2.2 Label elements

2.2.1 Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictogram



Precautionary statements

Signal word

Danger

Hazard statements

H315

Causes skin irritation

H318

Causes serious eye damage

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.

2.2.2 Other hazards

None Known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances/ Mixtures: Mixtures

Chemical Name	EC-No.	CAS-No	REACH-No	Content (%)
Silicic acid, sodium salt (Molar ratio Na ₂ O : SiO ₂ = 1 : > 1.6 - < 2.6)	215-687-4	1344-09-8	01-2119448725-31-0000	25-50

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information	No special measures necessary
If inhaled	No special measures necessary
On skin contact	In case of contact with skin, wash off immediately with plenty of water. Do not allow the product to dry on the skin. Consult a doctor if skin irritation persists.
On contact with eyes	Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
On ingestion	Immediately rinse mouth and drink plenty of water, do not induce vomiting, seek medical attention immediately.
Hints for the physician	This product contains alkali silicates.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.

Unsuitable extinguishing media Compatible with all usual extinguishing media.

5.2 Special hazards arising from the substance or mixture

None known.

5.3 Advice for firefighter

Special protective equipment In case of combustion use a suitable breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Avoid contact with skin, eyes and clothing. High risk of slipping due to leakage/spillage of product.

6.2 Environmental precautions

Do not allow to enter drains or waterways.

6.3 Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, universal binder). Rinse away rest with plenty of water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Observe the usual precautions for handling chemicals. Open and handle container with care.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels Keep only in the original container

Further information on storage conditions Protect from frost

Recommended storage temperature Value 5-45°C

VCI storage category 12 non-combustible liquids

Storage stability Under correct storing conditions the product is stable for at least 12 months

8. EXPOSURE CONTROLS

8.1 Control Parameters

No exposure limit value known

8.2 Exposure Controls

General protective and hygiene measures Observe the usual precautions when handling chemicals. Wash hands before breaks and after work. Do not eat, drink or smoke during work time.

Occupational exposure controls

Respiratory protection	Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, Filter B.
Hand protection	Gloves (alkali-resistant) Appropriate material: Latex KCL Lapren 706/ 0.6 mm /480 min.
Eye protection	Safety glasses with side protection shield.
Skin protection	Clothing as usual in the chemical industry.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	liquid, clear, colourless to slightly yellow	Ignitable, explosive range	no data
Odour	odourless	Vapour pressure	no data
Odour threshold	no data	Vapour density	no data
pH-value	13-14	Density	appr. 1.55 kg/l (at 20 °C)
Melting point/ freezing point	no data.	Solubility	completely miscible
Boiling range	appr.100 °C	Partition coefficient n-octanol/water	not applicable
Flash point	not flammable	Self-ignition temperature	no data
Evaporation rate	no data	Decomposition temperature	no data
Flammability (solid, gaseous)	not ignitable	Viscosity	appr. 600 mPa.s (at 20 °C)
		Explosive properties	no data
		Oxidising properties	no data

9.2 Other information

Not applicable

10. STABILITY & REACTIVITY

Conditions to avoid	Protect from frost
Materials to avoid	Acids
Hazardous decomposition products	No hazardous decomposition products known

11. TOXICOLOGICAL INFORMATION

Information is related to the product, data are used as cross reference.

Acute toxicity

Acute oral toxicity

Remarks	The toxicological data shown are those obtained from tests on products of similar composition.
Reference substance	Silicic acid, sodium salt (Molar ratio $\text{Na}_2\text{O} : \text{SiO}_2 = 1 : 2.0$; 40-50%) Species rat LD50 > 2000 mg/kg Source: data of supplier
Reference substance	Silicic acid, sodium salt (Molar ratio $\text{Na}_2\text{O} : \text{SiO}_2 = 1 : 3.2-3.4$; 35-40%) Species rat LD50 > 2000 mg/kg Source: data of supplier
Reference substance	Silicic acid, potassium salt (Molar ratio $\text{K}_2\text{O} : \text{SiO}_2 = 1 : 3.9-4.0$; 28-30%) Species rat LD50 > 2000 mg/kg Source: data of supplier
Remarks	The poisonous effect of the product is caused by its alkalinity and not by substance-specific systemic characteristics.

Irritant/corrosive effects

Irritant effect on skin	irritant
Irritant effect on eyes	irritant - risk of serious damage to eyes
Sensitization	non-sensitizing

Effects after repeated or prolonged exposition (subacute, subchronic, chronic)

Experience in practice	Irritating effects on the skin and mucous membrane. Risk of serious damage to eyes
Other information	When handled appropriately, even after long years of experience with this product, no adverse health effects are known.

12. ECOLOGICAL INFORMATION

Information is related to the product, data are used as cross reference.

Fish toxicity

Remarks	Ecotoxicological data are taken from a similar product of the same type.
Reference substance	Silicic acid, sodium salt (Molar ratio $\text{Na}_2\text{O} : \text{SiO}_2 = 1 : 3.6$; 35%) Species Brachidanio rerio LC50 > 2000 mg/l Duration of exposure 96 h Source: data of supplier
Reference substance	Silicic acid, potassium salt (Molar ratio $\text{K}_2\text{O} : \text{SiO}_2 = 1 : 3.9-4.0$; 29%) Species Leuciscus idus LCO > 500 mg/l Duration of exposure 48 h Source: data of supplier
Remarks	The ecotoxic effect of the product is mainly due to its alkalinity.

12. ECOLOGICAL INFORMATION - CONT'D.

Daphnia toxicity

Remarks Ecotoxicological data are taken from a similar product of the same type.

Reference substance Silicic acid, sodium salt (Molar ratio $\text{Na}_2\text{O} : \text{SiO}_2 = 1 : 3.2$; 35%)
Species *Daphnia magna*
ECO > 2000 mg/l
Duration of exposure 48 h
Source: data of supplier

Reference substance Silicic acid, potassium salt (Molar ratio $\text{K}_2\text{O} : \text{SiO}_2 = 1 : 3.9-4.0$; 29%)
Species *Daphnia magna*
ECO > 500 mg/l
Duration of exposure 24 h
Source: data of supplier

Remarks The ecotoxic effect of the product is mainly due to its alkalinity.

Bacteria toxicity

Remarks Ecotoxicological data are taken from a similar product of the same type.

Reference substance Silicic acid, sodium salt (Molar ratio $\text{Na}_2\text{O} : \text{SiO}_2 = 1 : 3.36$; 35%)
Species *Pseudomonas putida*
ECO > 1000 mg/l
Duration of exposure 48 h
Source: data of supplier

Remarks The ecotoxic effect of the product is mainly due to its alkalinity.

Biodegradability

Remarks Inorganic product. cannot be eliminated from the water by biological purification processes.

Behaviour in sewers (waste treatment plants) The product is an alkaline solution. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants. When low concentrations are discharged correctly into adapted biological sewage treatment plants, disturbance of the degradation activity of activated sludge is not likely.

13. DISPOSAL CONSIDERATIONS

Disposal recommendations for the product

EWC waste code: 06 02 05 other bases. Dilution and neutralization with acid. After solidification (e.g. as CaSiO_3 precipitate), landfill in accordance with local authorities. Re-use without reprocessing as long as not solidified.

Disposal recommendations for packaging

Completely emptied packagings can be given for recycling.

14. TRANSPORT INFORMATION

Land transport ADR/RID

Not classified as dangerous according to transport regulations

Sea transport IMDG/GGV(See)

Not classified as dangerous according to transport regulations

Air transport

Not classified as dangerous according to transport regulations

15. REGULATORY INFORMATION

15.2 Chemical safety assessment

Chemical Safety Assessment has been carried out for the substance. See Exposure scenario attached.

Contributing scenarios

PROC 1, 2, 3

PROC 4, 5, 6, 8a, 8b,
9, 10, 13, 14, 22, 23, 24

PROC 7,11

Risk Management Measures

Handle substance within a closed system. No other specific measures identified.

Wear suitable gloves (tested to EN374). No other specific measures identified

Covers percentage substance in the product up to 25%. Provide enhanced general ventilation by mechanical means. Wear suitable gloves (tested to EN374) and eye protection or wear a respirator conforming to EN140 with Type A/P2 filter. Avoid carrying out operation for more than 1 hour. Wear suitable gloves (tested to EN374) and eye protection.

Section 2.2

Control of environmental exposure

Not required, as soluble silicates, including sodium/potassium silicate/disodium metasilicate, do not meet the criteria for classification as dangerous to the environment (See Article 14.4 of REACH Regulation). Furthermore, as high production volume substances, soluble silicates have been reviewed to a great extent for their exposure potential to the environment and the possible risks arising from their release (Van Dokkum et al. 2002, OECD SIDS 2004, HERA 2005, and CEES 2008). It was concluded that soluble silicates are currently of low priority for further work because of their low hazard profile.

Section 3

3.1.

Exposure Estimation

Health

The ECETOC TRA tool has been used to estimate worker exposures

Section 4

4.1.

Guidance to check compliance with the Exposure Scenario

Health

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

16. OTHER INFORMATION

Hazard symbols			
Xi	Irritant	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
Skin irrit. 2	Skin irritation		
Eye dam. 1	Serious eye damage.	P303+P361 +P533	IF ON SK IN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
H-Phrases			
H315	Causes skin irritation.		
H318	Causes serious eye damage	P305+P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P-Phrases			
P262	Do not get in eyes, on skin, or on clothing		
Exposure Scenario		Section 2.1	Control of worker exposure.
Title	Workplace exposure to sodium silicate (EC 215-687-4)	Product characteristics; Physical form of product	liquid
Use Descriptor	Sector of Use: SU 3 and SU 22	Concentration of substance in product	Covers percentage substance in the product up to 100 %, unless otherwise stated.
	Process Categories (PROC):1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 11, 13, 14, 22, 23, 24, 25	Amounts used	No limit
	Environmental Release Categories: not required	Frequency and duration of use	Covers frequency up to: daily use, weekly, monthly, yearly.
Processes, tasks, activities covered	Manufacture of the substance as well as industrial and professional uses.	Human factors not influenced by risk management	Not applicable
Section 2	Operational conditions and risk management measures.	Other Operational Conditions affecting worker exposure	Assumes a good basic standard of occupational hygiene is implemented. The work occurs inside as well outside
	Whenever handling sodium silicate in a water preparation outside closed systems, depending on the use and concentration suitable, personal protective equipment (gloves, goggles, dust masks or respirators) are the preferred and only measure of control.		

