Safety Datasheet

Sodium Waterglass

(Comp. A)

according to Regulation (EC) 1272/2008 (CLP) & 67/548/EEC

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	Fluvius GmbH
Street/POB	Schiessstrasse 56
Postcode/City/Country	D-40549 Düsseldorf
Phone	+49 (0) 211-691 682-0
Telefax	+49 (0) 211-691 682-19
E-mail	info@fluvius.de

1.4 Emergency telephone number

Emergency telephone number	+44 (0) 845-408-9575 / Merseyside/UK +1 (800) 424-9300 / USA +49 (0) 30 19-240 / Berlin

2. Hazards identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard classes / categories	Hazard statements
Skin irrit. 2	H315
Eye dam. 1	H318

2.1.2 Classification according to 67/548/EEC

Classifi cation	R-phrases	S- phrases
Xi	R38	S26
	R41	S36/37/39

2.2 Label elements

2.2.1 Labelling according to Regulation (EC) 1272/2008 (CLP)

Hazard pictogram



Signal word: Danger

Hazard statements

H315	Causes skin irritation.
H318	Causes serious eye damage.

Precautionary statements

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 Labelling according to 67/548/EEC

Xi



R38	Irritating to skin.
R41	Risk of serious damage to eyes.
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.

Hazard determining component(s) for labelling:
Silicid acid, sodium salt (CAS: 1344-09-8, EINECS: 215-687-4).

2.2.3 Other hazards

None known.

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3. Composition/information on ingredients

Substances/mixtures: Substance

Chemical name	EC-No.	CAS-No.	REACH-No.	Content (%)
Silicic acid, sodium salt (Molar ratio Na2O : SiO2 = 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 meida	Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.
Non-suitable 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 absrobent 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.

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7.2 Conditions for safe storage, including any incompabilities

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/personal protection

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: fi lter 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
Odour	odourless
Odour threshold	no data
pH-value	13-14
Melting point/ freezing point	no data
Boiling range	appr. 100 °C
Flash point	not fl ammable
Evaporation rate	no data
Flammability (solid, gaseous)	not ignitable
Ignitable, explosive range	no data
Vapour pressure	no data
Vapour density	no data
Density	appr. 1,55 kg/l (at 20 °C)
Solubility	completely miscible
Partition coefficient n-octanol/water	not applicable
Self-ignition temperature	no data
Decomposition temperature	no data
Viscosity	appr. 600 mPa.s (at 20 °C)
Explosive properties	no data
Oxidising properties	no data

9.2 Other information

Not applicable.

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10. Stability and 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	Slilicic acid, sodium salt (Molar ratio $Na_2O : SiO_2 = 1 : 2.0$; 40-50%) Species rat LD50 > 2000 mg/kg Source data of supplier
Reference substance	Slilicic acid, sodium salt (Molar ratio $Na_2O : SiO_2 = 1 : 3.2\text{-}3.4$; 35-40%) Species rat LD50 > 2000 mg/kg Source data of supplier
Reference substance	Silicic acid, potassium salt (Molar ratio $K_2O : SiO_2 = 1 : 3.9\text{-}4.0$; 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-specifi c 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, cronic)

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

12. Ecological information

IInformation 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	Slilicic acid, sodium salt (Molar ratio $Na_2O : SiO_2 = 1 : 3.36$; 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 $K_2O : SiO_2 = 1 : 3.9\text{-}4.0$; 29%) Species Leuciscus idus LC0 > 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.

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Daphnia toxicity

Remarks	Ecotoxicological data are taken from a similar product of the same type.
Reference substance	Slilicic acid, sodium salt (Molar ratio $Na_2O : SiO_2 = 1 : 3.2$; 35%) Species Daphnia magna EC0 > 2000 mg/l Duration of exposure 48 h Source data of supplier
Reference substance	Silicic acid, potassium salt (Molar ratio $K_2O : SiO_2 = 1 : 3.9\text{-}4.0$; 29%) Species Daphnia magna EC0 > 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	Slilicic acid, sodium salt (Molar ratio $Na_2O : SiO_2 = 1 : 3.36$; 35%) Species Pseudomonas putida EC0 > 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 purifi cation 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 traetment 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 solidifi cation (e.g. as $CaSiO_3$ precipitate), landfi ll 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 classifi ed as dangerous according to transport regulations

Sea transport IMGD/GGVSee)
Not classifi ed as dangerous according to transport regulations

Air transport
Not classifi ed as dangerous according to transport regulations

15. Regulatory information

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

The product is classifi ed and labelled in accordance with EC Directive 99/45/EC.

Water Hazard Class (Ger.)	WGK 1
Registration no.	EC 215-687-4

15.2. Chemical Safety Assessment

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

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16. Other information

Hazard symbols

Xi	Irritant.
Skin irrit. 2	Skin irritation.
Eye dam. 1	Serious eye damage.

R-Phrases

R38	Irritating to skin.
R41	Risk of serious damage to eyes.

S- Phrases

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.

H- Phrases

H315	Causes skin irritation.
H318	Causes serious eye damage.

P- Phrases

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.

EXPOSURE SCENARIO

Title	Workplace exposure to sodium silicate (EC 215-687-4)
Use Descriptor	Sector of Use: SU 3 and SU 22 Process Categories (PROC): 1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 11, 13, 14, 22, 23, 24, 25 Environmental Release Categories: not required
Processes, tasks, activities covered	Manufacture of the substance as well as industrial and professional uses.
Section 2	**Operational conditions and risk management measures.** 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 respiratiors) are the preferred and only measure of control.
Section 2.1	**Control of worker exposure.**
Product characteristics Physical form of product	liquid
Concentration of substance in product	Covers percentage substance in the product up to 100 %, unless otherwise stated.
Amounts used	No limit
Frequency and duration of use	Covers frequency up to: daily use, weekly, monthly, yearly.
Human factors not infl uenced by risk management	Not applicable
Other Operational Conditions affecting worker exposure	Assumes a good basic standard of occupational hygiene is implemented. The work occurs inside as well outside.

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Contributing Scenarios	Risk Management Measures.
PROC 1, 2, 3	Handle substance within a closed system. No other specific measures identified.
PROC 4, 5, 6, 8a, 8b, 9, 10, 13, 14, 22, 23, 24	Wear suitable gloves (tested to EN374). No other specifi c measures identified.
PROC 7, 11	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 fi lter. 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 classifi cation as dangerous to the environment according to 67/548/EEC (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	Exposure Estimation
3.1.	**Health**
	The ECETOC TRA tool has been used to estimate worker exposures.
Section 4	**Guidance to check compliance with the Exposure Scenario**
4.1.	**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.

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