Sodium Waterglass (Comp. A)

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)

<table>
<thead>
<tr>
<th>Hazard classes / categories</th>
<th>Hazard statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin irrit. 2</td>
<td>H315</td>
</tr>
<tr>
<td>Eye dam. 1</td>
<td>H318</td>
</tr>
</tbody>
</table>

2.1.2 Classification according to 67/548/EEC

<table>
<thead>
<tr>
<th>Classification</th>
<th>R-phrases</th>
<th>S- phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xi</td>
<td>R38</td>
<td>S26</td>
</tr>
<tr>
<td></td>
<td>R41</td>
<td>S36/37/39</td>
</tr>
</tbody>
</table>

2.2 Label elements

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

<table>
<thead>
<tr>
<th>Hazard pictogram</th>
<th>Signal word</th>
<th>Hazard words</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Danger</td>
<td>H315 Causes skin irritation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>H318 Causes serious eye damage.</td>
</tr>
</tbody>
</table>

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.
### 3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>EC-No.</th>
<th>CAS-No.</th>
<th>REACH-No.</th>
<th>Content (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicic acid, sodium salt (Molar ratio Na2O : SiO2 = 1 : &gt;1.6 - &lt;2.6)</td>
<td>215-687-4</td>
<td>1344-09-8</td>
<td>01.211944872531-0000</td>
<td>25 - 50</td>
</tr>
</tbody>
</table>

### 4. First aid measures

#### 4.1 Description of first aid measures

<table>
<thead>
<tr>
<th>Condition</th>
<th>First aid measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>General information</td>
<td>No special measures necessary</td>
</tr>
<tr>
<td>Inhaled</td>
<td>No special measures necessary</td>
</tr>
<tr>
<td>Skin contact</td>
<td>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.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Immediately rinse mouth and drink plenty of water, do not induce vomiting, seek medical attention immediately.</td>
</tr>
</tbody>
</table>

#### 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.

### 5. Firefighting measures

#### 5.1 Extinguishing media

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product itself is non-combustible; adapt fire extinguishing measures to surrounding areas.</td>
<td></td>
</tr>
</tbody>
</table>

### 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.
Sodium Waterglass (Comp. A)

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/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: 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

Odour
odourless

Odour threshold
no data

pH-value
13-14

Melting point/freezing point
no data

Boiling range
appr. 100 °C

Flash point
not flammable

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.
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: Silicic acid, sodium salt (Molar ratio Na₂O : SiO₂ = 1 : 2.0; 40-50%)
Species rat
LD₅₀ > 2000 mg/kg
Source data of supplier

Reference substance: Silicic acid, sodium salt (Molar ratio Na₂O : SiO₂ = 1 : 3.36; 35%)
Species rat
LD₅₀ > 2000 mg/kg
Source data of supplier

Reference substance: Silicic acid, potassium salt (Molar ratio K₂O : SiO₂ = 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.

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 Na₂O : SiO₂ = 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 K₂O : SiO₂ = 1 : 3.9-4.0; 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.
Sodium Waterglass
(Comp. A)

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

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 CaSiO₃ 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 IMGD/GGVSee)
Not classified as dangerous according to transport regulations

Air transport
Not classified 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 classified 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.
Safety Datasheet

Sodium Waterglass
(Comp. A)

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

16. Other information

<table>
<thead>
<tr>
<th>Hazard symbols</th>
<th>Description</th>
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<tr>
<td>Xi</td>
<td>Irritant.</td>
</tr>
<tr>
<td>Skin irrit. 2</td>
<td>Skin irritation.</td>
</tr>
<tr>
<td>Eye dam. 1</td>
<td>Serious eye damage.</td>
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<td>Risk of serious damage to eyes.</td>
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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>S26</td>
<td>In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</td>
</tr>
<tr>
<td>S36/37/39</td>
<td>Wear suitable protective clothing, gloves and eye/face protection.</td>
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<td>H315</td>
<td>Causes skin irritation.</td>
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<tr>
<td>H318</td>
<td>Causes serious eye damage.</td>
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<tr>
<td>P262</td>
<td>Do not get in eyes, on skin, or on clothing.</td>
</tr>
<tr>
<td>P280</td>
<td>Wear protective gloves/protective clothing/eye protection/face protection.</td>
</tr>
<tr>
<td>P303+P361+P353</td>
<td>IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</td>
</tr>
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<td>P305+P351+P338</td>
<td>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</td>
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EXPOSURE SCENARIO

<table>
<thead>
<tr>
<th>Title</th>
<th>Workplace exposure to sodium silicate (EC 215-687-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Descriptor</td>
<td>Sector of Use: SU 3 and SU 22</td>
</tr>
<tr>
<td>Process Categories (PROC):</td>
<td>1, 2, 3, 4, 5, 6, 7, 8a, 8b, 9, 10, 11, 13, 14, 22, 23, 24, 25</td>
</tr>
<tr>
<td>Environmental Release Categories:</td>
<td>not required</td>
</tr>
<tr>
<td>Processes, tasks, activities covered</td>
<td>Manufacture of the substance as well as industrial and professional uses.</td>
</tr>
</tbody>
</table>

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 respirators) are the preferred and only measure of control.

Section 2.1

Control of worker exposure.

Product characteristics

<table>
<thead>
<tr>
<th>Physical form of product</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration of substance in product</td>
<td>Covers percentage substance in the product up to 100 %, unless otherwise stated.</td>
</tr>
<tr>
<td>Amounts used</td>
<td>No limit</td>
</tr>
<tr>
<td>Frequency and duration of use</td>
<td>Covers frequency up to: daily use, weekly, monthly, yearly.</td>
</tr>
<tr>
<td>Human factors not influenced by risk management</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Other Operational Conditions affecting worker exposure</td>
<td>Assumes a good basic standard of occupational hygiene is implemented. The work occurs inside as well outside.</td>
</tr>
</tbody>
</table>

Phone: 810-412-4740 · www.S1Eonline.com
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 specific 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 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 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.