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

1.1. Product identifier
Product form : Mixture
Trade name : RetroPlate
EC no : 215-687-4
CAS No. : 1344-09-8
Formula : SiO2Na2O
Synonyms : SODIUM SILICATE / Sodium Silicate / Silicic acid, sodium salt / Sodium silicate glass / Silicic acid, sodium salt / Silicate of soda / Silicic acid, Sodium salt
IUPAC name : sodium hydroxy(oxo) silanolate
Product group : Trade product

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 : Curing agent and densifier, hardener and dustproofer for portland cement based concrete

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet
Only representative:
INTERTEK France
Etablissement de Chalon Sur Saône
Espaces Entreprises
Route de Demigny
71102 CHALON SUR SAONE France
Phone : +33 385 99 12 74
Email : Iasf.Reach@intertek.com

Manufacturer:
Curecrete Chemical Company
1201 West Spring Creek Place
Springville, Utah 84663 USA
Phone: +1 801 489 5663
www.retroplatesystem.com

1.4. Emergency telephone number
Emergency number : +1-801-629-0667 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aqueous solutions with solids concentration <40% are not to be classified according to Regulation 1999/45/EC

Adverse physicochemical, human health and environmental effects
None known

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
No labelling applicable

2.3. Other hazards
This substance/mixture does not meet the PBT criteria of REACH, annex XIII.
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Directive 67/548/EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicic acid, sodium salt</td>
<td>(CAS No.) 1344-09-8</td>
<td>35</td>
<td>Xi; R36/38 R37</td>
</tr>
<tr>
<td></td>
<td>(EC no) 215-687-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The classification of soluble silicates depends on the molar ratio (SiO2:Na2O) of individual products. Molar ratios (MR) define the ratio of SiO2 versus Na2O in the substance. This substance has a MR = 3.3, thus the classification above is based on this value of the molar ratio.

Full text of R-, H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation : Unlikely route of exposure. Remove victim to fresh air.
First-aid measures after skin contact : Wash off immediately with soap and plenty of water. Seek medical attention if ill effect or irritation develops.
First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids away from eyes (15 minutes minimum). Seek medical attention immediately.
First-aid measures after ingestion : Do not induce vomiting. If swallowed, rinse mouth with water (only if the person is conscious). Drink directly plenty of water or milk. Never give anything by mouth to an unconscious person.
4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: Breathing of atomized mist may cause bronchial irritation (caustic). Symptoms may include burning and itching in nose and throat.

Symptoms/injuries after skin contact: Repeated or prolonged skin contact may cause dermatitis and defatting irritation (itching, redness, blistering).

Symptoms/injuries after eye contact: Symptoms may include stinging, tearing, redness, swelling and blurred vision.

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

Treat symptomatically. High pH, caustic.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Not combustible.

5.3. Advice for firefighters

Protective equipment for firefighters: Extra personal protection: complete protective clothing including self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment: Wear protective clothing as described in Section 8 of this safety data sheet.

Emergency procedures: Avoid contact with skin and eyes. Do not allow to enter drains or water courses. Dilute with plenty of water.

6.1.2. For emergency responders

Protective equipment: Wear protective clothing as described in Section 8 of this safety data sheet.

Emergency procedures: Avoid contact with skin and eyes. Do not allow to enter drains or water courses. Dilute with plenty of water.

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment: contain the discharged material. Contain and collect as any solid.

Methods for cleaning up: Contain large spills to maximize product recovery or disposal. Place the adsorbed material into containers and remove to a safe place. Dilute residue with water.

Other information: The diluted reaction product, following reaction on the concrete surface, is generally recognized as safe. If spilled, may cause the floor to be slippery.

6.4. Reference to other sections

Refer to sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Avoid breathing dust, mist or spray. Avoid contact with skin, eyes and clothes.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage condition(s): Keep container closed when not in use. Store in original container. Store away from freezing (avoid freezing during storage).

Incompatible materials: Aluminum and other light metals and their alloys.

Storage temperature: ≤ 70 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Silicic acid, sodium salt (1344-09-8)

DNEL/DMEL (Workers)

- Long-term - systemic effects, dermal: 1.59 mg/kg bodyweight/day
- Long-term - systemic effects, inhalation: 5.61 mg/m³

DNEL/DMEL (General population)

- Long-term - systemic effects, oral: 0.8 mg/kg bodyweight/day
- Long-term - systemic effects, inhalation: 1.38 mg/m³
- Long-term - systemic effects, dermal: 0.8 mg/kg bodyweight/day

8.2. Exposure controls

Appropriate engineering controls: Use low-pressure sprayer. Avoid the formation of mists in the atmosphere. If generating aerosol cannot be avoided, provide adequate ventilation and exhaust in the work area.

Personal protective equipment: Gloves. Protective goggles.

Hand protection: Wear protective gloves.

Eye protection: Use splash goggles when eye contact due to splashing is possible.

Skin and body protection: Wear suitable protective clothing. Wear long sleeves.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Approved dust or mist respirator should be used if airborne particles are generated when handling this material.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: Viscous liquid.

Colour: Yellow.

Odour: Odourless.

Odour threshold: No data available
**RetroPlate**

**Safety Data Sheet**

according to Regulation (EC) No. 453/2010

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>11.3 - 11.6</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solidification point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>110 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not flammable.</td>
</tr>
<tr>
<td>Self ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>23.7 mm Hg (at -4 °C)</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>0.999 (at -4 °C)</td>
</tr>
<tr>
<td>Density</td>
<td>1.45 - 1.55 (at 20 °C)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: ca 100%, Material highly soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive as none of the components is classified as explosive or oxidizing.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>None of the components is classified for oxidizing properties.</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity**

| 10.1. Reactivity                              | No additional information available |
| 10.2. Chemical stability                      | Stable.                             |
| 10.3. Possibility of hazardous reactions      | No additional information available |
| 10.4. Conditions to avoid                     | None known.                         |

**10.5. Incompatible materials**

Reacts with aluminum and other light metals and their alloys, with zinc and tin by forming hydrogen peroxide which, together with air, can form explosive mixtures. The product adheres to and etches glass walls. The product decomposes when mixed with acids releasing silicic acid.

**10.6. Hazardous decomposition products**

None known.

**SECTION 11: Toxicological information**

| 11.1. Information on toxicological effects    |
| Acute toxicity                                | Not classified                     |

Silicic acid, sodium salt (1344-09-8)

<table>
<thead>
<tr>
<th>Toxicity parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>1153 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 4640 mg/kg</td>
</tr>
<tr>
<td>ATE (oral)</td>
<td>1153 mg/kg</td>
</tr>
</tbody>
</table>

**11.2. Skin corrosion/irritation**

Not classified

**11.3. Respiratory or skin sensitisation**

Not classified

**11.4. Germ cell mutagenicity**

Not classified

**11.5. Carcinogenicity**

Not classified

**11.6. Reproductive toxicity**

Not classified

**11.7. Specific target organ toxicity (single exposure)**

Not classified

**11.8. Specific target organ toxicity (repeated exposure)**

Not classified

**11.9. Aspiration hazard**

Not classified

**SECTION 12: Ecological information**

| 12.1. Toxicity                              |
|--------------------------------------------|------------------------------------|
| Silicic acid, sodium salt (1344-09-8)      |
| LC50 fishes 1                              | 3185 mg/l (Exposure time: 96 h - Species: Brachydanio rerio) |
| EC50 Daphnia 1                             | 216 mg/l (Exposure time: 96 h - Species: Daphnia magna) |

**12.2. Persistence and degradability**

No additional information available

**12.3. Bioaccumulative potential**

Silicic acid, sodium salt (1344-09-8)

| BCF fishes 1                                | (no bioaccumulation expected)     |

**12.4. Mobility in soil**

No additional information available

**12.5. Results of PBT and vPvB assessment**

Silicic acid, sodium salt (1344-09-8)

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.
Silicic acid, sodium salt (1344-09-8)

This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Regional legislation (waste) : Comply with applicable local, national and international regulation.
Waste treatment methods : Recycle product or dispose properly. Containers that cannot be cleaned shall be disposed of in the same manner as the product.
Additional information : The diluted reaction product, following reaction on the concrete surface, is generally recognized as safe.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number
Not a dangerous good in sense of transport regulations.

14.2. UN proper shipping name
Not applicable

14.3. Transport hazard class(es)
Not applicable

14.4. Packing group
Not applicable

14.5. Environmental hazards
Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport
Not applicable

14.6.2. Transport by sea
Not applicable

14.6.3. Air transport
Not applicable

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

15.1.1. EU-Regulations
No Annex XVII restrictions
Contains no REACH candidate substance


15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes : All requirements according to Regulation (EC) No 453/2010 were applied.
Sources of Key data : MSDS, SDS.

Other information : The classification of soluble silicates depends on the molar ratio (SiO2:Na2O) of individual products. The molar ratio of this substance is known to be 3.3. Different molar ratios may cause product to be classified.

Full text of R-, H- and EUH- phrases:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
<td></td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
<td></td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
<td></td>
</tr>
<tr>
<td>R36/38</td>
<td>Irritating to eyes and skin</td>
<td></td>
</tr>
<tr>
<td>R37</td>
<td>Irritating to respiratory system</td>
<td></td>
</tr>
<tr>
<td>Xi</td>
<td>Irritant</td>
<td></td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II)

This information is based on current state-of-knowledge, and is presented in good faith but without any guarantee. It is the responsibility of the user to ensure that the information is complete and suitable for the specific intended use.