



SAFETY DATA SHEET

SODIUM SILICATE SOLUTION

Issued: July 2015

Hazardous according to criteria of Safe Work Australia

1 PRODUCT & COMPANY UNDERTAKING IDENTIFICATION

Product Name: **SODIUM SILICATE SOLUTION**
Major Recommended Use: Concrete and masonry surface treatment. Industrial protective sealer.
Company: ASC Building Supplies
ABN: 90 169 877 954
Address: 12 Yale Drive, Epping, Victoria, 3076
Telephone Number: 61 (03) 9408 7722
Email: sales@ascbuildingsupplies.com.au
Web site: www.australianslate-crete.com.au



2 HAZARDS IDENTIFICATION

GHS Classification: GHS05 Corrosive to metals (Category 1)
Serious eye damage (Category 1)
GHS07 Specific target organ toxicity - single exposure (Category 3), Respiratory system
Skin irritation (Category 2)



GHS05



GHS07

Signal word: DANGER

Hazard statements: H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation
H335 May cause respiratory irritation.

Precautionary statements:

Prevention P234 Keep only in original container.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response P301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.
Rinse skin with water/shower.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call POISON INFORMATION CENTRE on **13 11 26** or doctor.
P390 Absorb spillage to prevent material damage.

Storage P403+233 Store in a well-ventilated place. Keep container tightly closed.

Disposal P501 Dispose of contents/ container to an approved waste disposal plant.

Hazard Codes: Xi (irritant)

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

Safety Statements: S24/25 Avoid contact with skin and 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.
S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this SDS, container or label.

Poisons Schedule: S5

ADG CLASS: Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Not regulated for transport of Dangerous Goods: UN, IATA, IMDG

Signs and Symptoms of Exposure (Acute effects):

Swallowed: Ingestion can result in nausea, vomiting, abdominal pain and diarrhoea. May cause severe irritation to the mouth, throat and stomach.

Eye: A severe eye irritant. May cause conjunctivitis (inflammation of the eyes) and possibly corneal burns and ulceration.

Skin: Irritating to skin. May cause itching and skin rash.

Inhaled: Exposure to vapours at room temperature is an unlikely route of exposure due to its low vapour pressure. Spray mist will cause respiratory irritation and may result in coughing as well as inflammation of nose, throat and windpipe.

Chronic: Prolonged or repeated skin contact may cause dry skin. Defatting of the skin can result in irritation and dermatitis (inflammation of the skin).

Emergency Overview: Clear to hazy, colourless, odourless, thick liquid. Causes eye, skin and digestive irritation. Spray mist causes irritation to the respiratory tract. Spills are slippery. High pH is harmful to aquatic life. Reacts with acids, ammonium salts, reactive metals and some organics. Non-combustible but flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, tin, lead and zinc.

Other Information: Dries to form glass film which can easily cut skin. Can etch glass if not promptly removed.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Proportion	Classification
Silicic acid, sodium salt	1344-09-8	30-60%	Xi; R38-41
Water	7732-18-5	to 100%	

Description: Mixture of sodium oxide (Na₂O), silica (SiO₂) and water.

4 FIRST AID MEASURES

First Aid Facilities: Eyewash fountains and safety showers should be available for emergency use.

4.1 Description of first aid measures

Eye Contact	Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain immediate medical attention.
Skin Contact	Wash affected skin with plenty of water. If symptoms develop, obtain medical attention.
Inhalation	Remove patient from exposure, keep warm and at rest. Obtain medical attention.
Ingestion	Do not induce vomiting. Wash out mouth with water and give 200-300mL (1-2 cups) of water to drink. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Alkaline.
Irritating to eyes and skin.
The toxicity of sodium silicate is dependent on the silica to alkali ratio and on the pH.

4.3 Indication of any immediate medical attention and special treatment needed

Obtain immediate medical attention.

5 FIRE FIGHTING MEASURES

NON-FLAMMABLE, NON-COMBUSTIBLE substance

5.1 Extinguishing media

Suitable extinguishing media	Compatible with all standard firefighting techniques.
Unsuitable media	None known.

5.2 **Special hazards arising from the substance or mixture** Not applicable. Aqueous solution. Non-combustible

5.3 **Advice for fire-fighters** None.

6 ACCIDENTAL RELEASE MEASURES

6.1 **Personal precautions:** Wear protective clothing, boots, gloves, and eye protection. (refer Section 8.2)

6.2 **Environmental precautions** Do not allow to enter drains, sewers or watercourses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

- 6.3 **Methods and materials for containment and cleaning up** Caution – spillages may be slippery. Contain spillages with sand, earth or any suitable adsorbent material. Transfer to a container for disposal or recovery.
- 6.4 **Reference to other sections** See Also Section 8.

7 HANDLING & STORAGE

- 7.1 **Precautions for safe handling** Avoid contact with eyes, skin and clothing. Avoid generation of mist. Provide adequate ventilation. Emergency shower and eye wash facilities should be readily available. See also Section 8
- 7.2 **Conditions for safe storage, including incompatibilities** Storage temperature 0-95°C. Loading temperature 45-95°C. Do not allow material to freeze. Provide an adequate bund wall. Unsuitable containers: Aluminium
See also Section 10.
- 7.3 **Specific end use(s)** See also Annex to the extended Safety Data Sheet.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

SUBSTANCE	Occupational Exposure Limits
Silicic acid, sodium salt	No Occupational Exposure Limit assigned. An exposure limit of 2 mg/m ³ (15 min TWA) is recommended by analogy with sodium hydroxide (UK EH40).

- 8.2 **Exposure controls** Wear protective equipment to comply with good occupational hygiene practice. Do not eat, drink or smoke at the work place.
- 8.2.1 **Appropriate engineering Controls** Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.
- 8.2.2 **Personal Protection**
- Respiratory protection Respiratory protection not normally required. If engineering controls are not effective in controlling airborne exposure then an approved respirator or dust mask should be used. Refer Australian Standards AS/NZS 1715 and 1716 for more information.
- Eye/face protection Safety glasses with top and side shields, goggles or face shield. Refer Australian Standards AS 1336 and AS/NZS 1337 for more information.
- Skin protection Impervious plastic or rubber gloves and suitable protective work wear. Refer Australian Standards AS 2161, 2919 and AS/NZS 2210 for more information.
- 8.2.3 **Environmental Exposure Controls** The primary hazard of sodium silicate is the alkalinity. Avoid release to the environment.

9 PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Clear colourless liquid
Smell:	Odourless
pH:	11 – 13 (very alkaline)
Boiling Point (at 760 mmHg):	105 – 108°C
Melting/Pour Point:	≈ 0°C
Flashpoint:	Not flammable, will not burn
Flammability:	Non-combustible liquid. The aqueous solution is not flammable under normal conditions of use. Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, tin, lead and zinc.
Explosive Limits:	Not applicable
Auto-ignition Temperature:	Not applicable
Oxidizing Properties:	No data available
Vapour Pressure (20°C):	No data available
Vapour Density (Air =1):	No data available
Solubility in Water:	Soluble
Viscosity:	300 – 500 mPa.s
Specific Gravity:	1.39 – 1.45
VOC content:	Nil

10 STABILITY & REACTIVITY

10.1	Reactivity	See Section 10.3 below
10.2	Chemical stability	Stable under normal use conditions.
10.3	Possibility of hazardous Reactions	When arc welding vessels containing aqueous solutions of this material, take care to control any explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminium, zinc, tin and their alloys evolving hydrogen gas which can form an explosive mixture with air. Can react violently if in contact with acids. Can react with sugar residues to form carbon monoxide.
10.4	Conditions to avoid	See Section 10.3 above
10.5	Incompatibility (materials to avoid)	See Section 10.3 above
10.6	Hazardous decomposition product(s)	None known.

11 TOXICOLOGICAL INFORMATION**Acute toxicity**

Ingestion	All symptoms of acute toxicity are due to high alkalinity. Material will cause irritation. Oral LD ₅₀ (rat) 3400 mg/kg body weight
Inhalation	Mist is irritant to the respiratory tract. All symptoms of acute toxicity are due to high alkalinity. Inhalation LC ₅₀ (rat) >2.06 g/m ³
Skin Contact	Material will cause irritation. Dermal LD ₅₀ (rat) >5000 mg/kg bw
Eye Contact	Material will cause irritation.
Skin corrosion/irritation	Irritating to skin.
Serious eye damage/irritation	Irritating to eyes.
Sensitisation	Not sensitising.
Mutagenicity	No evidence of genotoxicity. In vitro/in vivo negative.
Carcinogenicity	No structural alerts. IARC, NTP, OSHA, ACGIH do not list this product as known or suspected carcinogen.
Reproductive toxicity	No evidence of reproductive toxicity or developmental toxicity.
STOT – single exposure	Not classified
STOT – repeated exposure	Not classified. NOAEL oral (rat) >159 mg/kg bw/dose
Aspiration hazard	Not classified
Other information	

12 ECOLOGICAL INFORMATION

12.1	Toxicity	Fish (Brachydanio rerio) LC ₅₀ (96 hour) 1108 mg/L Aquatic invertebrates: (Daphnia magna) EC ₅₀ (48 hour) 1700 mg/L
12.2	Persistence and degradability	Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.
12.3	Bioaccumulative potential	Inorganic. The substance has no potential for bioaccumulation.
12.4	Mobility in soil	Not applicable.
12.5	Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
12.6	Other adverse effects	The alkalinity of this material will have a local effect on ecosystems sensitive to changes in pH.

13 DISPOSAL CONSIDERATIONS

Precautions:	Refer to Section 7 before handling the product or containers.
Waste disposal:	Recover or recycle if possible. Otherwise: dispose of this material and its container to hazardous or special waste collection point. Disposal should be in accordance with local, state or national legislation.
Product disposal:	Recover or recycle if possible. Otherwise: dispose of this material and its container to hazardous or special waste collection point. Disposal should be in accordance with local, state or national legislation.
Container disposal:	Drain container thoroughly. Send to drum recoverer or metal reclaimer.

14 TRANSPORT INFORMATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Mode	Regulations	Class	Packing Group	Notes
-	UN	None allocated	Not applicable	
Sea	IMDG	None allocated	Not applicable	This material is not classified as dangerous under IMDG regulations
Road/Rail	ADG Code	None allocated	Not applicable	This material is not classified as dangerous according to the Australian Dangerous Goods Code
Air	IATA/ICAO	None allocated	Not applicable	This material is not classified as dangerous under IATA regulations

This material is a Scheduled Poison (S5) and must be stored, maintained and used in accordance with the relevant regulations.

15 REGULATORY INFORMATION

EEC Symbol: Xi Irritant

GHS Classification:

GHS05 Corrosive to metals (Category 1)
 Serious eye damage (Category 1)
 GHS07 Specific target organ toxicity - single exposure (Category 3), Respiratory system
 Skin irritation (Category 2)

Full text of H-Statements referred to under sections 2 and 3.

Eye Dam. Serious eye damage
 H290 May be corrosive to metals.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation
 H335 May cause respiratory irritation.
 Met. Corr. Corrosive to metals
 Skin Corr. Skin corrosion
 STOT SE Specific target organ toxicity – single exposure

EEC Council Directives relating to the classification, packaging and labelling of dangerous substances and preparations Risk (R) and Safety (S) phrases:

R38 Irritating to skin.
 R41 Risk of serious damage to eyes.
 S24/25 Avoid contact with skin and 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.
 S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this SDS, container or label.

16 OTHER INFORMATION

Uses and restrictions: Raw material for use in the chemical industry.

MSDS distribution: The information in this document should be made available to all who may handle the product.

Reference: The content and format of this safety data sheet is in accordance with the 3rd Revised Edition of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia's Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals (2011)

Issue Date: 9th July, 2015

Reason for Issue: New product

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