Infosafe No™ 1CH7U	Issue Date :January 2021	RE-ISSUED by CHEMSUPP

Product Name **SODIUM SILICATE Solution**

Classified as hazardous

1. Identification

GHS Product Identifier: SODIUM SILICATE Solution

Company Name: CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)

Address: 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

Telephone/Fax Number: Tel: (08) 8440-2000

Emergency phone number: CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

E-mail Address: www.chemsupply.com.au

Recommended use of the chemical and restrictions on use: Catalysts and silica gels, soaps and detergents, adhesives (especially sealing and laminating paper board containers), water treatment, bleaching and sizing of textiles and paper pulp, ore treatment, soil solidification, glass foam, pigments, drilling fluids, binder for abrasive wheels, foundry cores and molds, waterproofing mortars and cements, impregnating wood, flame retardant, enhanced oil recovery and analytical chemistry.

Other Names

Name	Product Code
SODIUM SILICATE Solution	ST015
Water glass, Silicate of soda	

Other Information

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture: Eye Damage/Irritation: Category 2A
Skin Corrosion/Irritation: Category 2

Signal Word (s): WARNING

Hazard Statement (s)

H315 Causes skin irritation.
H319 Causes serious eye irritation.

Pictogram (s): Exclamation mark

Precautionary statement – Prevention

P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.

Precautionary statement – Response

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

	Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Sodium silicate	1344-09-8	30-60 %
	Add water to make total of 100 %	7732-18-5	

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek medical advice.
Skin	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	May liberate toxic fumes in fire including oxides of silicon and sodium.
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media. Small fire: Use dry chemical, CO2 or water spray. If safe to do so, move undamaged containers from fire area. Large fire: Use dry chemical, CO2, foam or water spray - Do not use water jets. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.
Specific hazards arising from the chemical	Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. Some may ignite combustibles (wood, paper, clothing, etc.) Contact with metals may evolve flammable hydrogen gas.
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.
Other Information	Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, tin, lead and zinc.

6. Accidental release measures

Personal Precautions	Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing. Dries to form glass film which can easily cut skin. Spilled liquids are very slippery.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or

	overdrum.
Clean-up Methods - Large Spillages	Prevent from spreading by making a barrier with sand, earth or other containment material. Seek expert advice on handling and disposal.
Environmental Precautions	Prevent contamination of soil and water. Sinks and mixes with water. Liquid is alkaline and may increase the pH. High pH can be harmful to aquatic life. Avoid release into water systems and sewers.

7. Handling and storage

Precautions for Safe Handling	Do not breathe vapour. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.
Conditions for safe storage, including any incompatibilities	Keep containers closed at all times. Store away from acids. Keep dry and protect from direct sunlight. Keep away from food, drink and animal feeding stuffs.
Corrosiveness	Corrosive to some metals such as aluminium, tin, lead and zinc. May be mildly corrosive to human tissues.
Unsuitable Materials	Aluminium Tin or tin plate Zinc

8. Exposure controls/personal protection

Other Exposure Information	No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m3. All atmospheric contamination should be kept to as low a level as is workable. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.
Appropriate engineering controls	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Liquid
Appearance	Clear to hazy colourless, viscous liquid.
Odour	Odourless.
Melting Point	Below 0 °C
Boiling Point	105 - 108°C at 100 kPa
Solubility in Water	Soluble.
Specific Gravity	1.2 - 1.7 (depends upon concentration)
pH	pH 11-13 (depending on concentration).
Vapour Pressure	18 mmHg at 20 °C
Viscosity	20 - 5000 cP @ 20 °C
Volatile Component	30 -60%
Flash Point	Does not burn
Flammability	Non combustible material.
Auto-Ignition Temperature	N/A - does not burn.
Other Information	Absorbs carbon dioxide on exposure to air, which results in the deposition of insoluble silica.

10. Stability and reactivity

Chemical Stability	Stable in sealed containers. absords carbon dioxide on exposure to air, resulting in the deposition of insoluble silica.
Conditions to Avoid	Strong heating, resulting in irritating sodium silicate mists. Leaving solutions exposed to carbon dioxide in the air. Prolonged storage above 50°C or below 10°C.
Incompatible Materials	Fluorine, mineral acids, organic acids, organic materials. May produce hydrogen gas on prolonged contact with metals. Gels when mixed with acids. Will react exothermically with acids. Unsuitable Container Materials: Sodium Silicate solutions are strongly alkaline and are not compatible with aluminium, copper, brass, bronze, zinc, tin and lead. Can etch glass if not promptly removed.
Hazardous Decomposition Products	Silicon oxide, sodium oxide.
Possibility of hazardous reactions	May react with ammonium salts to produce ammonia gas. Forms gels and generates heat when mixed with acids. Forms flammable hydrogen gas when in contact with aluminium, zinc, copper etc.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): >3000 mg/kg
Ingestion	Swallowing can result in nausea, vomiting, abdominal pain and diarrhoea. May cause severe irritation to the mouth, throat and stomach.
Inhalation	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.
Skin	Irritant. May cause redness and pain. May cause deep penetration ulcers of the skin.
Eye	A severe eye irritant. May cause conjunctivitis (inflammation of the eyes) and possibly corneal burns and ulceration.

Respiratory sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive Toxicity	Not classified based on available information.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Not classified based on available information.
Chronic Effects	Prolonged or repeated skin contact may cause dermatitis.
Mutagenicity	Not classified based on available information.

12. Ecological information

Ecotoxicity	Harmful effect due to pH shift.
Persistence and degradability	Diluted material rapidily depolymerises to yield dissilved silica in a form that is indistinguishable from natural dissolved silica.
Mobility	Expected to be mobile in soil. Diluted material rapidly depolymerises to yield dissolved silica in a form that is indistinguishable from natural dissolved silica.
Bioaccumulative Potential	No bioaccumulation is to be expected.
Short Summary of Assessment of Environmental Impact	No environmental hazard is anticipated provided that the material is handled and disposed of with due care and attention.
Environmental Protection	Do not allow product to enter drains, waterways or sewers.
Acute Toxicity - Fish	LC50 (96h) = 210mg/l , Danio rerio, Na, MR 1.0 LC50 (96h) = 260-310mg/l , Oncorhynchus mykiss, Na, MR 3.1
Acute Toxicity - Daphnia	EC50 (48h) = 1700mg/l, Daphnia Magna, Na, MR 3.2

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
Waste Disposal	After dilution or neutralization may be landfilled. Not suitable for inceration.

14. Transport information

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

15. Regulatory information

Regulatory Information	All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS), or exempted. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S5

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. National Road Transport Commission, 'Australian Code for the Transport of

Dangerous Goods by Road and Rail 7th. Ed.'.
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals'.
Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand.
Safe Work Australia, 'Hazardous Chemical Information System'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.

Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:
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