SAFETY DATA SHEET

SODIUM SILICATE SOLUTION

Infosafe No.: 1HH1H
ISSUED Date : 20/01/2019
ISSUED by: CULBEAG HOLDINGS Pty Ltd

1. IDENTIFICATION

GHS Product Identifier
SODIUM SILICATE SOLUTION

Company Name
CULBEAG HOLDINGS Pty Ltd (ABN 95 007 197 079)

Address
19 Allied Drive Tullamarine
VICTORIA 3043 Australia

Telephone/Fax Number
Tel: 03 9335 4400
Fax: 03 9335 1750

Emergency phone number
03 9335 4400

Emergency Contact Name
Mr Ian Cameron

E-mail Address
sales@culbeag.com.au

Recommended use of the chemical and restrictions on use
Detergent ingredient, adhesive, binder, feedstock for silica source, general chemical.

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.
Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
Acute Toxicity - Oral: Category 4
Eye Damage/Irritation: Category 2A
Skin Corrosion/Irritation: Category 2

Signal Word (s)
WARNING

Hazard Statement (s)
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Pictogram (s)
Exclamation mark

Precautionary statement – Prevention
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see / refer to FIrst Aid measures in Safety Data Sheet (Section 4) or on this label).
P330 Rinse mouth.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

Precautionary statement – Disposal
Dispose of contents and/or container in accordance with State/Territorial or Commonwealth regulations.

Other Information
In Australia the "POISON CENTER" is the Poisons Information Centre; telephone number is 131126.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Sodium silicate	1344-09-8	30% - 60%
Water	7732-18-5	30% - 60%

4. FIRST-AID MEASURES

Inhalation
Remove victim from exposure source to fresh air. If breathing is difficult, give oxygen as needed. Seek medical attention.

Ingestion
Do NOT induce vomiting. Never give fluids or induce vomiting if the patient is unconscious or having convulsions. Rinse out the mouth with water. Give a glass of water to drink. Obtain medical attention immediately.

Skin
Remove contaminated clothing. If skin or hair contact occurs flush skin and hair with running water for at least 15 minutes. Seek medical attention.

Eye contact
If in eyes, hold eyelids apart and flush the eye continuously with running water for a least 15 minutes. Continue flushing until advised to stop by the Poisons Information Centre or a doctor. Seek medical attention promptly.

First Aid Facilities
Eye wash facility or unit. Drinking quality water. Shower.

Advice to Doctor
Product is alkaline. Treat symptomatically based on individual reactions of patient and judgment of doctor. Signs of tissue damage may be delayed.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
In case of fire, use appropriate extinguishing media for major source of fire & could include dry chemical, water spray, regular foam and carbon dioxide.

Hazards from Combustion Products
Non-combustible liquid.

Special Protective Equipment for fire fighters
Fire fighters should wear self-contained breathing apparatus and full protective clothing along with protective equipment appropriate for major source of fire.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal
Stop leak if a safe operation. Avoid walking through spilled product as it very slippery. Do NOT let product enter drains or waterways. Contact local EPA office if spilled product enters waterways.
Soak up spilled product in absorbent non-combustible material such as sand or soil. Avoid use of sawdust or cellulose. Collect absorbed material and place in a labelled, dry sealable container for safe disposal. NOTE product dries to form a glassy film which can easily cut skin.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid skin and eye contact. Ensure that an eyebath and a safety shower are available and ready for use in the workplace. Wash thoroughly after handling and use.

Conditions for safe storage, including any incompatibilities
Store in original containers in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Check frequently for damage and/or leakage. Protect against physical damage. Store away from incompatible materials (See Section 10). Protect from direct sunlight and moisture. Store between 0° - 95°C. Product is not classified as a dangerous good for storage.

Additional information on precautions for use
Observe good personal hygiene practices and recommended, approved work procedures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values
A Workplace Exposure Standard (WES)* has not been established by SWA*for this product. The manufacturer's recommend a limit for sodium silicate of 5 mg per cubic metre, TWA and a STEL of 5 mg per cubic metre; where
TWA - means the Time Weighted Average concentration of a particular substance determined over a normal 8-hour working period for a 5-day working week.
STEL = Short Term Exposure Limit, the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal 8-hour work day.

Appropriate Engineering Controls
Use with adequate ventilation. Keep containers closed when not in use. Safety shower and eyewash fountain should be within direct access.

Respiratory Protection
Select* and use an approved dust and mist respirator* where spray mist occurs.

Eye Protection
Wear chemical goggles or safety glasses (with side shields), conforming with Australian Standards*.

Hand Protection
Select and wear approved* plastic or rubber gloves. Refer to an Australian Standard* for guidance.

Body Protection
Wear long-sleeved overalls. Use gloves*, boots* and aprons suitable for the proposed operations. PVC, rubber or neoprene are suggested protective materials for this equipment. Selection of protective clothing* can be guided by reference to an Australian Standard.
Remove contaminated clothing promptly. Thoroughly wash contaminated clothing before re-use.

Hygiene Measures
It is a good work practice to wash hands, arms and face thoroughly before eating, drinking or using toilet facilities and at the end of each work period.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Clear to hazy, colourless viscous liquid. No odour.

Melting Point
0°C

Boiling Point
101-102°C

Solubility in Water
Soluble

Specific Gravity
1.2 - 1.7 (Water = 1)

pH
11 - 13

Flash Point
Not applicable

Flammable Limits - Lower
Not applicable

Flammable Limits - Upper
Not applicable

Other Information
Generates flammable hydrogen gas on contact with non-ferrous metals metals (refer to Section 10).
Water boils off at 105 - 108°C.

10. STABILITY AND REACTIVITY

Reactivity and Stability
Product is stable under directed conditions of use, storage and temperature.
Absorbs carbon dioxide on exposure to air which results in deposition of insoluble silica.

Conditions to Avoid
Avoid excessive heat, direct sunlight, moisture, static discharges, high temperatures and leaving solutions exposed to carbon dioxide in the air.

Incompatible materials
Incompatible with oxidizing agents, acids, aluminium, copper, brass, bronze, zinc, tin, lead and sources of ignition.

Hazardous Decomposition Products
Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminium, copper, brass, bronze, tin, lead and zinc.

Possibility of hazardous reactions
Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas.

Other Information
Can etch glass if not promptly removed.

11. TOXICOLOGICAL INFORMATION

Toxicology Information
Acute oral toxicity of this product has not been tested. Oral LD50 Rat for 100% sodium silicate is 1280 mg per Kg. It is expected that LD50 for a 30 - 60% solution is greater than 2000 mg/kg.

Ingestion
Swallowing may result in irritation, nausea, abdominal pain and diarrhoea. May cause severe burns to the mouth, throat and stomach.

Inhalation
Exposures to vapours at room temperature is an unlikely route of exposure due to low vapour pressure. Spray mist will cause respiratory irritation and may cause coughing as well as inflamation of the nose, throat and windpipe

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

Eye
A severe eye irritant. May cause conjunctivitis and possible corneal burns and ulceration.

12. ECOLOGICAL INFORMATION

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.

Environmental Fate
This product is not persistent in aquatic systems, but its high pH (11-13) when product is undiluted or unneutralised is acutely harmful to aquatic life.

Environmental Protection
Avoid discharge to drains, water courses, sewers and water storages.

13. DISPOSAL CONSIDERATIONS

Waste Disposal
Dispose of wastes in an approved waste disposal system in accordance with State, Territorial or Commonwealh waste disposal regulations.

14. TRANSPORT INFORMATION

Transport Information
Not classified as a dangerous good for transport by road, rail,sea or air. Not classified as a dangerous good for storage.

U.N. Number
None Allocated

Transport hazard class(es)
None Allocated

15. REGULATORY INFORMATION

Regulatory information
Classified as a HAZARDOUS CHEMICAL according to GHS classification rules* adopted by SWA.
Product is classified as a Skin Corrosion/Irritant - Cat. 2; Serious Eye Damage/Irritation - Cat. 2A; and Acute Toxicity (Oral) - Cat. 4.
This classification requires a Signal word, specific statements and a pictogram demonstrating the degree of hazard to health to be included on the labelling of this product.
Refer to Section 2.

Poisons Schedule
S5

Packaging & Labelling
In the workplace, decanted quantities of the product must be labelled in accord with Code of Practice for labelling workplace hazardous chemicals*. Labelling purposes a signal word, pictogram, essential statements for hazard, response, prevention, storage and disposal, which are detailed above in Section 2 of this SDS.
Note: that the pictogram required for labelling this product is illustrating a health hazard NOT that the product is a Dangerous Good.

NB: If this product is repacked for sale to the general public the packaging and labelling requirements of the relevant Act controlling the sale of scheduled poisons need to be adopted. Refer to National Poisons Standard*.

Australia (AICS)
The principal ingredients are included in the Australian Inventory of Chemical Substances(AICS)*.

16. OTHER INFORMATION

Date of preparation or last revision of SDS
Original MSDS reviewed, revised and issued as a Safety Data Sheet (SDS)on 20th January 2019. This document is in the format required by the National code of practice for preparing a Safety Data Sheet*. Significant changes to Section 2 and Section 15. Minor changes to Sections 4,5,7,8,9,10 and 11. Revised list of References to reflect new classification procedures and references which are now refernced by a * in the SDS.

References
* GHS = Globally Harmonised System for the Classification and Labelling Hazardous Chemicals. United Nations publication
* Australian Dangerous Goods Code, 7th Edition,as amended.
* WES = Exposure Standards for Atmospheric Contaminants in the Occupational Environment in exposure standards section of HCIS, as amended. (HCIS is the Hazardous Chemical Information System managed by SWA.)
* SWA = Safe Work Australia formerly National Occupational Health and Safety Commission.
* AS = Australian Standard.
* NZS = New Zealand Standard
* AS/NZS 1716: Respiratory protective devices.
* AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.
* AS/NZS 1336: Recommended practices for eye protection in the industrial environment.
* AS/NZS 1337: Eye protectors for the industrial applications.
* AS/NZS 2161.1: Occupational protective gloves - Part 1: Selection, use and maintenance.
* AS/NZS 2161.2: Occupational protective gloves - Part 2: General requirements
* AS/NZS 2210.1: Safety, protective and occupational footwear - Guide to selection, care and use.
* AS/NZS 4501-2008 Occupational protective clothing Parts 1 & 2; Guideline and General requirements respectively.
* National Model Code of Practice for Labelling of Workplace Hazardous Chemicals, Safe Work Australia
* National Poisons Standard - Commlaw website
* AICS = Australian Inventory of Chemical Substances maintained by National Industrial Chemicals Notification and Assessment Scheme.
* National Model Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals, Safe Work Australia.

Contact Person/Point
BUSINESS HOURS: Product Information Officer, (03) 9335 4400

This SDS summarises our best knowledge of the health and safety hazard information of this product and how to safely handle and use the product in the workplace. Each user must review this SDS in the context of how the product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is available on our website at www.culbeag.com.au

END OF SDS