Central Chemical Supplies LTD.

SAFETY DATA SHEET

SECTION1:IDENTIFICATIONOFTHESUBSTANCE/MIXTURE ANDOFTHECOMPANY/UNDERTAKING

1.1 Product identifier

Product Name	**Silicic acid, sodium salt (MR>3.2)**
Alternative names	Sodium silicate solution
CAS No.	1344-09-8
EINECS No.	2156874
REACH Registration No.	01-2119448725-31-0010

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s)	General purpose industrial chemical for use in a wide range of applications. Binding agent ; Corrosion inhibitor ; Dust binding agent ; Flame retardant or fire preventing agent ; Flotation agent ; Stabiliser ; Viscosity control agent ; See also Annex to the extended Safety Data Sheet.
Uses advised against	None known.

1.3 Details of the supplier of the safety data sheet

Company Identification	Central Chemical Supplies Ltd 44 Hall Road Donaghcloney Craigavon, Co Armagh Northern Ireland, UK BT66 7LJ
Telephone:	+44 (0)2838 881936
E-Mail (competent person)	info@ccsni.co.uk

1.4 Emergency telephone number

Emergency Phone No.	+44 (0)7872 501842

SECTION2:HAZARDSIDENTIFICATION

2.1 Classification of the substance or mixture

EC Classification Not classified as dangerous for supply/use.

Hazards summary Alkaline.

2.2 Label elements

EC Classification No. 67/548/EEC	Not classified as dangerous for supply/use.
Risk Phrases	None.
Safety Phrases	S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 Other hazards Not applicable.

SECTION3:COMPOSITION/INFORMATIONONINGREDIENTS

EC Classification No. 1272/2008

Ingredient(s)	%W/W	CAS No.	EINECS No. / REACH Registration	Hazard symbol(s) and hazard statement(s)
Silicic acid, sodium salt	20 - 40	1344-09-8	2156874 01-2119448725-31	H315 : Skin Irrit. 2 ; H319 : Eye Irrit. 2 ; H335 : STOT SE 3 ;
Water	60 - 80	7732-18-5	2317912	

EC Classification No. 67/548/EEC

Ingredient(s)	%W/W	CAS No.	EINECS No. / REACH Registration	EC Classification and Risk Phrases
Silicic acid, sodium salt	20 - 40	1344-09-8	2156874 01-2119448725-31	Xi R36/37/38
Water	60 - 80	7732-18-5	2317912	

SECTION4:FIRSTAIDMEASURES

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 200-300 ml (half a pint) of water to drink. Obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed — Alkaline. 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.

SECTION5:FIRE-FIGHTINGMEASURES

5.1 Extinguishing media

Suitable Extinguishing Media — Compatible with all standard fire fighting techniques.

Unsuitable Extinguishing 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.

SECTION6:ACCIDENTALRELEASEMEASURES

6.1 Personal precautions, protective equipment and emergency procedures — Wear suitable protective clothing. Wear eye/face protection.

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.

SECTION7:HANDLINGANDSTORAGE

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 any incompatibilities Keep at a temperature not exceeding (℃): 50
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.

SECTION8:EXPOSURECONTROLS/PERSONALPROTECTION

8.1 Control parameters

SUBSTANCE.	Occupational exposure limits
Silicic acid, sodium salt	No Occupational Exposure Limit assigned. An exposure limit of 2 mg/m3 (15 min TWA) is recommended by analogy with sodium hydroxide.

Derived No Effect Level (DNEL)	Oral / mg/kg bw/d	Inhalation / mg/m³	Dermal / mg/kg bw/d
Workers - Acute - Systemic effects	-	-	-
Workers - Acute - Local effects	-	-	-
Workers - Long Term - Systemic effects	-	5.61	1.59
Workers - Long Term - Local effects	-	-	-
Consumers - Acute - Systemic effects	-	-	-
Consumers - Acute - Local effects	-	-	-
Consumers - Long Term - Systemic effects	0.80	1.38	0.80
Consumers - Long Term - Local effects	-	-	-

For further details and guidance see Exposure Scenarios in Annex to the extended Safety Data Sheet (eSDS). Risk management measures (RMMs) for identified uses must be implemented as described in this SDS and in the relevant exposure scenarios.

	Predicted No Effect Concentration
PNEC Water (fresh)	7.5 mg/l
PNEC Water (marine)	1 mg/l
PNEC Water (intermittent)	7.5 mg/l
PNEC Sediment	Not available
PNEC Soil	Not available
PNEC Sewage treatment plant	348 mg/l
PNEC Secondary Poisoning (oral)	Not applicable

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 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. Advice on respiratory protective equipment is given in the HSE (Health and Safety Executive) publication HS(G)53.

Eye/face protection: Chemical goggles.

Skin protection	Wear suitable protective clothing and gloves. Plastic or rubber gloves. For example EN374-3, level 6 breakthrough time (>480min). Wear suitable overalls.
8.2.3 Environmental Exposure Controls	The primary hazard of sodium silicate is the alkalinity. Avoid release to the environment.

SECTION9:PHYSICALANDCHEMICALPROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Liquid. Almost colourless.
Odour	Odourless.
Odour threshold (ppm)	Not applicable.
pH (Value)	Alkaline.
Freezing point (℃)	Not applicable.
Melting point (℃)	Not applicable.
Boiling Point (℃)	100
Flash point (℃) [Closed cup]	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Explosive limit ranges	Not applicable.
Vapour pressure (mmHg)	Not applicable.
Vapour density (Air=1)	No data.
Density (g/ml)	No data.
Solubility (Water)	Soluble.
Solubility (Other)	No data.
Partition coefficient	No data.
Auto ignition point (℃)	Not applicable.
Decomposition temperature (℃)	Not applicable.
Viscosity (mPa. s)	Not applicable.
Explosive properties	Not applicable.
Oxidising Properties	Not applicable.
9.2 Other information	No data.

SECTION10:STABILITYANDREACTIVITY

10.1 Reactivity	See Section: 10.3
10.2 Chemical stability	Stable.
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
10.5 Incompatible materials	See Section: 10.3
10.6 Hazardous Decomposition Product(s)	None known.

SECTION11:TOXICOLOGICALINFORMATION

11.1 Information on toxicological effects

Acute toxicity

Ingestion	All symptoms of acute toxicity are due to high alkalinity. Material will cause irritation. Oral LD50 (rat) 3400 mg/kg bw
Inhalation	All symptoms of acute toxicity are due to high alkalinity. Mist is irritant to the respiratory tract. Inhalation LC50 (rat) >2.06 g/m³

Skin Contact	Repeated and/or prolonged skin contact may cause slight irritation. Dermal LD50 (rat) >5000 mg/kg bw
Eye Contact	Liquid or mist may cause discomfort and mild irritation.
skin corrosion/irritation	Repeated and/or prolonged skin contact may cause slight irritation.
Serious eye damage/irritation	Liquid or mist may cause discomfort and mild irritation.
Sensitisation	Not sensitising.
Mutagenicity	No evidence of genotoxicity. In vitro/in vivo negative.
Carcinogenicity	No structural alerts.
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/d
Aspiration hazard	Not classified

SECTION12:ECOLOGICALINFORMATION

12.1 Toxicity	Fish (Brachydanio rerio) LC50 (96 hour) 1108 mg/l Aquatic invertebrates: (Daphnia magna) EC50 (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.

SECTION13:DISPOSALCONSIDERATIONS

13.1 Waste treatment methods	Discharge of this product to sewage treatment works is dependent on local regulations with regard to pH controls. Dispose of this material and its container to hazardous or special waste collection point. This material is classified as hazardous waste under EEC Directive 91/689/EEC (and amendments). This material is classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894. Disposal should be in accordance with local, state or national legislation.

SECTION14:TRANSPORTINFORMATION

14.1 UN number	Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.
14.2 Proper Shipping Name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.
14.4 Packing Group	Not applicable.
14.5 Environmental hazards	Not classified as a Marine Pollutant.
14.6 Special precautions for user	Unsuitable containers: Aluminium
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

SECTION15:REGULATORYINFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

TSCA Inventory Status: Reported/Included. AICS
Inventory Status: Reported/Included. DSL/NDSL
Inventory Status: Reported/Included.
German Water Hazard Classification VwVwS: Product ID number 1314, WGK class 1 (low hazard to water).

15.2 Chemical Safety Assessment Information available on request.

SECTION16:OTHERINFORMATION

Data referenced in this eSDS is from company-owned information and from data legitimately accessed by CCS Ltd through membership of Industry Consortia or other agreements. This includes data relating to toxicology, ecotoxicology, DNELs, PNECs and other information in this eSDS and its annex.

This SDS was last reviewed: 07/2011
The following sections contain revisions or new statements: All sections updated to comply with Regulation (EC) No.1907/2006 (REACH) and Regulation (EC) No.1272/2008 (CLP) and their amendments.

GHS Classification EC No.	(anticipated)
1272/2008	Not classified as dangerous for supply/use.
Signal word(s)	None.
Hazard statement(s)	None.

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