

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name	SSN, Sodium Silicate Solution 3.22 weight ratio sodium silicate
Alternative names	Sodium silicate solution
CAS No.	1344-09-8
EINECS No.	215-687-4

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 ; Stabilizer ; Viscosity control agent
Uses advised against	None known.

1.3 Details of the supplier of the safety data sheet

Company Identification	Chemical Store Inc. 1059 Main Avenue, Clifton, NJ 07011
Telephone:	+1 973-405-6248
E-Mail (technical information)	info@ChemicalStore.com

Distributed Online by:
ChemicalStore.com
ZChemicals.com
ScienceKitStore.com

1.4 Emergency telephone number

Emergency Phone No.	+1 973-420-4972
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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification	(anticipated) Skin Irrit. 2 Eye Irrit. 2
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Hazards summary

Alkaline.
Irritating to eyes and skin.

2.2 Label elements

Hazard pictogram(s)



Signal word(s)

Warning

Hazard statement(s)

H315: Causes skin irritation.
H319: Causes serious eye irritation.

Precautionary statement(s)

P262: Do not get in eyes, on skin, or on clothing.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with

water/shower.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Regulation (EC) No. 1272/2008 (CLP)

Ingredient(s)	%W/W	CAS No.	EINECS No. / REACH Registration	Hazard symbol(s) and hazard statement(s)
Silicic acid, sodium salt	37.5	1344-09-8	215-687-4 01-2119448725-31	H315 : Skin Irrit. 2 ; H319 : Eye Irrit. 2 ; H335 : STOT SE 3 ;
Water	62.5	7732-18-5	231-791-2	

SECTION 4: FIRST AID MEASURES**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**4.3 Indication of any immediate medical attention and special treatment needed**

Alkaline.

Irritating to eyes and skin. The toxicity of sodium silicate is dependent on the silica to alkali ratio and on the pH. Obtain immediate medical attention.

SECTION 5: FIRE-FIGHTING MEASURES**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.

SECTION 6: ACCIDENTAL RELEASE MEASURES**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.

SECTION 7: HANDLING AND 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.

7.2 Conditions for safe storage, including any incompatibilities

Keep at a temperature not exceeding (°C): 50 Do not allow material to freeze.
Provide an adequate bund wall. Unsuitable containers: Aluminium See
Also Section 10..

SECTION 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

8.2.2 Personal Protection

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.

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 (EN 166).

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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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 (°C)	Not applicable.
Melting Point (°C)	Not applicable.
Boiling Point (°C)	100
Flash Point (°C) [Closed cup]	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Explosive Limit Ranges	Not applicable.
Vapour Pressure (mm Hg)	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 (°C)	Not applicable.
Decomposition Temperature (°C)	Not applicable.
Viscosity (mPa. s)	Not applicable.
Explosive properties	Not applicable.
Oxidising Properties	Not applicable.
9.2 Other information	No data.

SECTION 10: STABILITY AND REACTIVITY

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.

SECTION 11: TOXICOLOGICAL INFORMATION

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 Mist is irritant to the respiratory tract. All symptoms of acute toxicity are due to high alkalinity. Inhalation LC50 (rat) >2.06 g/m³

Skin Contact Material will cause irritation. Dermal LD50 (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.

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

Other information

SECTION 12: ECOLOGICAL INFORMATION

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.

SECTION 13: DISPOSAL CONSIDERATIONS

- 13.1 Waste treatment methods** Dispose of this material and its container to hazardous or special waste collection point. This material is classified as hazardous waste under EC Directive 2008/98/EC. This material is classified as hazardous waste under the Hazardous Waste (England and Wales) Regulations SI 2005 No. 894. 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.

SECTION 14: TRANSPORT INFORMATION

- 14.1 UN number** Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'. Not classified as hazardous under DOT or US Transport Recommendations. International Maritime Dangerous Goods (IMDG) Code: Not classified as hazardous
- 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 MARPOL73/78 and the IBC Code**

SECTION 15: REGULATORY INFORMATION

15.1 U.S. REGULATIONS:

OSHA REGULATORY STATUS:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

Not regulated.

SARA EHS Chemical (40 CFR 355.30)

Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):

Acute Health Hazard

EPCRA SECTION 313 (40 CFR 372.65):

Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):

Not regulated

FDA: Sodium Silicates have Generally Recognized as Safe (GRAS) status under specific FDA regulations. Refer to 21 Code of Federal Regulations (CFR) 173, 175, 176, 177, 182, and 184, which is accessible on the FDA's website. This product is not produced under all current Good Manufacturing Practices (cGMP) requirements as defined by the Food and Drug Administration (FDA).

15.2 NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

TSCA 12(b): This product is not subject to export notification.


Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

SECTION 16: OTHER INFORMATION

Data referenced in this Safety Data Sheet is in part gathered from publicly available sources believed to be reliable and includes our own information based on in-house experiments. This includes data relating to toxicology, ecotoxicology, DNELs, PNECs and other information in this SDS.

This SDS was last reviewed: 01/2013

The following sections contain revisions or new statements: All sections.

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Hazard pictogram(s)	
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