

SAFETY DATA SHEET

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

1.1 Product identifier

Product Name N® CLEAR Sodium Silicate Solution

Alternative names Sodium silicate solution

(2.6<MR<=3.2)

CAS No. 1344-09-8

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

Uses advised against None known.

1.3 Details of the supplier of the safety data sheet

Company Identification National Silicates

429 Kipling Ave Toronto, ON M8Z 5C7

Telephone: 416-255-7771

E-mail: sds.uk@pqcorp.com

1.4 Emergency telephone number

Emergency Phone No. National Silicates 416-255-7771

USA CHEMTREC 1-800-424-9300 (24 hrs)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

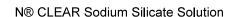
GHS Classification Skin Irrit. 2 Eye Irrit. 2

2.2 Label elements

Hazard pictogram(s)



Signal word(s) Warning





Hazard statement(s) H315: Causes skin irritation.

H319: Causes serious eye irritation.

P262: Do not get in eyes, on skin, or on clothing. Precautionary statement(s)

P280: Wear protective gloves/protective clothing/eye protection/face

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 Dries to form glass film which can easily cut skin. Can etch glass if

not promptly removed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	%W/W	CAS No.	EINECS No. /	Hazard symbol(s) and
			REACH Registration	hazard statement(s)
Silicic acid, sodium salt	37.5	1344-09-8	215-687-4	H315 : Skin Irrit. 2 ;
				H319 : Eye Irrit. 2
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. 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.

Do not induce vomiting. Wash out mouth with water and give 200-Ingestion

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

4.2 Most important symptoms Alkaline.

and effects, both acute and

delayed

Skin Contact

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.

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

Not applicable. Aqueous solution. Non-combustible.

the substance or mixture

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.



N® CLEAR Sodium Silicate Solution

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.

See Also Section 8

7.2 Conditions for safe storage, including any incompatibilities

Store at temperature below 60°C/140°F

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.

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/m3 (15 min TWA) is recommended by analogy		
	with sodium hydroxide (UK EH40).		

8.2 Exposure controlsWear protective equipment to comply with good occupational

hygiene practice. Do not eat, drink or smoke at the work place. Engineering methods to prevent or control exposure are preferred.

controlsMethods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process

conditions.

8.2.2 Personal Protection

8.2.1 Appropriate engineering

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

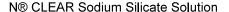
to the environment.

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. 11-12
Freezing Point (°C) Not applicable.
Melting Point (°C) Not applicable.

Boiling Point (°C) 100

Flash Point (°C) [Closed cup]

Evaporation rate

Flammability (solid, gas)

Explosive Limit Ranges

Not applicable.

Not applicable.

Not applicable.

Not applicable.

Vapour pressure (Pascal)

Vapour Density (Air=1) No data.

Density (g/ml) 1.41 g/cm3 (20°C), 42.0° Bé, 11.75 lbs/gal

Solubility (Water) Soluble. Solubility (Other) No data. Partition Coefficient No data Auto Ignition Point (°C) Not applicable. Not applicable. Decomposition Temperature (°C) Viscosity (mPa. s) Not applicable. Not applicable. Explosive properties 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 hazardousWhen 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 avoidSee Section: 10.310.5 Incompatible materialsSee Section: 10.310.6 Hazardous decompositionNone known.

product(s)

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

Eve 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/d



Aspiration hazard Not classified

SECTION 12: ECOLOGICAL INFORMATION

Fish (Brachydanio rerio) LC50 (96 hour) 1108 mg/l 12.1 Toxicity

Aguatic invertebrates: (Daphnia magna) EC50 (48 hour) 1700 mg/l

Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into 12.2 Persistence and molecular species indistinguishable from natural dissolved silica. degradability

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 Not classified as PBT or vPvB.

assessment

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.

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

Not applicable. 14.2 Proper Shipping Name 14.3 Transport hazard class(es) Not applicable. Not applicable. 14.4 Packing group

Not classified as a Marine Pollutant. 14.5 Environmental hazards Unsuitable containers: Aluminium 14.6 Special precautions for user

14.7 Transport in bulk according Not applicable.

to Annex II of MARPOL73/78 and

the IBC Code

SECTION 15: REGULATORY INFORMATION

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. SARA TITLE III: Not an Extremely Hazardous Substance under §302. Not a Toxic Chemical under §313. Hazard

Categories under §§311/312: Acute

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.



SECTION 16: OTHER INFORMATION

Data referenced in this eSDS is from company-owned information and from data legitimately accessed by PQ Corporation 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: 01/2017
The following sections contain revisions or new statements: All sections.
Signal word(s)
Warning

Hazard pictogram(s)

Warning

THE INFORMATION ON THIS SAFETY DATA SHEET IS BELIEVED TO BE ACCURATE AND IT IS THE BEST INFORMATION AVAILABLE TO NATIONAL SILICATES THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONS FOR HANDLING A CHEMICAL BY A PERSON TRAINED IN CHEMICAL HANDLING. NATIONAL SILICATES MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED WITH RESPECT TO SUCH INFORMATION OR THE PRODUCT TO WHICH IT RELATES, AND WE ASSUME NO LIABILITY RESULTING FROM THE USE OR HANDLING OF THE PRODUCT TO WHICH THIS SAFETY DATA SHEET RELATES. USERS AND HANDLERS OF THIS PRODUCT SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION PROVIDED HEREIN FOR THEIR OWN PURPOSES.