



SUPREME PETRO
CHEMICALS

IMPORTER & DISTRIBUTOR OF INDUSTRIAL CHEMICALS ·
SINCE 1997

No. 145, 1st Floor, Raja Muthiah Road,
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SAFETY DATA SHEET (SDS)

Sodium Silicate *SDS*

REV 3.1
29 JULY 2026
GHS REV.11 (2025)

CAS 1344-09-8 EC 215-687-4 SIGNAL WORD DANGER

GHS05

Corrosive

GHS07

Harmful / Irritant

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

Product Name	Sodium Silicate
Product Type	Sodium Silicate — corrosive / irritant chemical
Chemical Family	Inorganic silicate salt
CAS No.	1344-09-8
EC No.	215-687-4
Intended Use	Industrial / professional use as described on the SPC product page.
Restrictions on Use	Industrial / professional use only. Confirm suitability for final application before use.
Supplier	Supreme Petro Chemicals
Address	No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
Emergency Contact	Sanketh — +91 86087 80096 · Sudarshan — +91 81979 47045
Email	admin@supremepetrochemicals.com
Product Page	https://www.supremepetrochemicals.com/products/sodium-silicate
SDS Revision	July 2026
SDS Version	3.1

SECTION 2 HAZARD IDENTIFICATION

Met. Corr. 1; Acute Tox. 4 (oral); Skin Corr. 1; Skin Irrit. 2; Eye Dam. 1; Eye Irrit. 2; STOT SE 3

Signal Word DANGER



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GHS Pictograms

GHS05 (Corrosive) | GHS07 (Harmful / Irritant)

HAZARD STATEMENTS

- H290 — May be corrosive to metals
- H302 — Harmful if swallowed
- H314 — Causes severe skin burns and eye damage
- H315 — Causes skin irritation
- H318 — Causes serious eye damage
- H319 — Causes serious eye irritation
- H335 — May cause respiratory irritation

PRECAUTIONARY – PREVENTION

- P233 — Keep container tightly closed.
- P260 — Do not breathe vapours or spray.
- P271 — Use only outdoors or in a well-ventilated area.
- P272 — Contaminated work clothing should not be allowed out of the workplace.
- P273 — Avoid release to the environment.
- P280 — Wear protective gloves / eye protection / face protection.

PRECAUTIONARY – RESPONSE / STORAGE / DISPOSAL

- P301+P310 — IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- P303+P361+P353 — IF ON SKIN OR HAIR: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 — IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 — IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P312 — Call a POISON CENTER or doctor if you feel unwell.
- P331 — Do NOT induce vomiting.
- P403+P235 — Store in a well-ventilated place. Keep cool.
- P405 — Store locked up.
- P501 — Dispose of contents/container in accordance with local regulations.



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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	EC NO.	% W/W	GHS CLASSIFICATION
Sodium Silicate	1344-09-8	215-687-4	100 (anhydrous basis; aqueous solutions vary by grade)	Met. Corr. 1; Acute Tox. 4 (oral); Skin Corr. 1; Skin Irrit. 2; Eye Dam. 1; Eye Irrit. 2; STOT SE 3

Percentages are by weight. Aqueous solution grades contain water; confirm exact concentration with supplier COA. Full text of H-statements listed in Section 16.

SECTION 4 FIRST AID MEASURES

Inhalation	Remove person to fresh air. Keep at rest in a position comfortable for breathing. If symptoms persist or breathing is difficult, seek medical attention immediately.
Skin Contact	Remove contaminated clothing immediately. Wash affected skin thoroughly with copious water and soap for at least 15 minutes. Seek medical attention if irritation, burns, or symptoms persist.
Eye Contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention — product is classified Eye Dam. 1.
Ingestion	Rinse mouth with water. Do not induce vomiting. If the person is conscious, give water to drink. Seek immediate medical advice / call a POISON CENTER.
Note to Physician	Treat symptomatically based on exposure route and product hazards. Product causes severe corrosive burns at high concentrations. Supportive care as appropriate.

SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media	Sodium silicate is not flammable. Use extinguishing media appropriate to surrounding materials (water spray, CO2, dry chemical, foam).
Unsuitable Media	Avoid direct high-pressure water jet that may spread alkaline solution.
Specific Hazards	Product is not combustible. On heating or in fire conditions, may release irritating sodium oxide fumes. Containers under heat may



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	build pressure or rupture.
Protective Equipment	Wear full protective clothing and self-contained breathing apparatus (SCBA) when firefighting in confined areas or where fume generation is possible.
Special Procedures	Prevent contaminated fire-fighting run-off from entering drains, sewers, or watercourses. Evacuate non-essential personnel from the area.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate the spill area. Avoid skin and eye contact. Use appropriate PPE as listed in Section 8. Keep unnecessary personnel away.
Environmental Precautions	Prevent entry into drains, sewers, soil, and watercourses. Inform relevant authorities if significant release occurs. Alkaline pH may affect aquatic systems.
Containment / Clean-up	For liquid spills: absorb with inert material (sand, dry earth, vermiculite). Collect in clearly labelled, compatible containers and seal. For solid/granular: sweep up carefully; avoid generating dust. Transfer to labelled waste containers for disposal through an approved waste contractor.
Reference to Sections	See Section 8 for PPE details, Section 13 for disposal, and Section 15 for regulatory information.

SECTION 7 HANDLING AND STORAGE

Handling Precautions	Use adequate local exhaust ventilation. Avoid contact with skin, eyes, and mucous membranes. Avoid generating mist or dust. Use corrosion-resistant equipment. Ground containers to prevent static build-up where applicable.
Hygiene	Wash hands thoroughly after handling. Remove and wash contaminated clothing before reuse. Do not eat, drink, or smoke when using this product.
Storage Conditions	Store in original, tightly closed, corrosion-resistant containers. Protect from frost and extreme heat. Inspect containers regularly for leakage or damage.
Storage Temperature	Ambient temperature (5 °C – 35 °C). Avoid freezing — sodium silicate solutions may gel or crystallise below ~5 °C depending on



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	grade.
Incompatible Materials	Strong acids (will precipitate silica gel and may generate heat). Strong oxidising agents. Aluminium and zinc metals (corrosion). Avoid contact with concentrated mineral acids.
Segregation	Segregate from food, drink, animal feed, incompatible chemicals, and strong acids.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit	No specific OEL established for sodium silicate (CAS 1344-09-8) under OSHA/NIOSH/ACGIH or Indian MSIHC at time of issue. Apply ALARA / good industrial hygiene principles. Verify with regional authority or supplier SDS before use.
Engineering Controls	Use closed handling systems or local exhaust ventilation where mist, spray, or dust may be generated. Provide eyewash station and safety shower in the work area.
Respiratory Protection	Where ventilation is inadequate or mist/dust is generated, use NIOSH/EN-approved respirator: P95/P100 particulate filter or combined particulate/acid-gas cartridge as applicable. Use SCBA for emergencies.
Hand / Eye / Skin	Gloves: chemical-resistant (nitrile, butyl, neoprene, or PVC); select for breakthrough time. Eyes: EN 166 / ANSI Z87.1 chemical splash goggles; add face shield for splash or bulk-transfer risk. Body: chemical-resistant apron or coverall; safety footwear. Provide eyewash and safety shower accessible from work area.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless to pale yellow viscous liquid (aqueous solution, typical commercial grade) or white/grey amorphous solid (anhydrous / granular grade). Odourless.
Odour	Odourless
Odour Threshold	Not applicable (odourless)
pH	11–13 (1% aqueous solution, typical); strongly alkaline. Exact value grade-dependent — verify from supplier COA.
Melting / Freezing Point	~1089 °C (anhydrous Na ₂ SiO ₃ , peer-reviewed). Aqueous solutions: pour point / gel point typically ≤ 5 °C depending on ratio and



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	concentration.
Boiling Point / Range	~100 °C (aqueous solution grades, as water component; nonahydrate). Anhydrous: decomposes above melting point; no conventional boiling point.
Flash Point	Not applicable — sodium silicate is not flammable. Not flammable (USCG, 1999).
Auto-ignition Temperature	Not applicable — product is not combustible.
Flammability Limits	Not flammable. Upper/lower explosive limits: not applicable.
Vapour Pressure	Negligible (aqueous solution at ambient temperature, ~2.3 kPa at 20 °C as water); anhydrous: essentially zero at ambient. See supplier SDS for grade-specific value.
Vapour Density (air = 1)	Not applicable for solid / non-volatile solution. See supplier SDS for grade-specific value.
Relative Density	1.1–1.7 at 20 °C (aqueous solution, varies by grade / SiO ₂ :Na ₂ O ratio and concentration; USCG, 1999). Anhydrous solid: ~2.4 g/cm ³ .
Solubility in Water	Very soluble in cold and hot water (nonahydrate and common solution grades). Soluble in dilute sodium hydroxide. Insoluble in alcohol and acids (silica gel precipitates).
Log Pow (Partition Coeff.)	Not applicable — inorganic ionic substance; does not partition into octanol. Log Kow is not a relevant parameter.
Evaporation Rate	Negligible at ambient temperature (aqueous solutions behave similarly to water). See supplier SDS for grade-specific value.
Viscosity	Highly variable by grade: low-ratio solutions may be mobile; high-ratio or high-solids grades are viscous. See supplier COA / SDS for grade-specific value.
VOC Content	Negligible / not applicable (inorganic aqueous solution). Assess per applicable regional VOC regulations if formulated into a product.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage and handling conditions. Aqueous solutions are stable within normal storage temperature range.
Conditions to Avoid	Avoid contact with strong acids (precipitates silica gel, exothermic). Avoid freezing (solution may gel or crystallise). Avoid contamination with incompatible materials.
Incompatible Materials	Strong mineral acids (HCl, H ₂ SO ₄ , HNO ₃ , H ₃ PO ₄ — react to precipitate silica, potentially exothermic). Strong oxidising agents.



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	Aluminium chloride (AlCl ₃) under elevated temperature. Zinc and aluminium metals (corrosion by alkaline attack).
Hazardous Decomposition	At elevated temperatures or in fire: may release sodium oxide (Na ₂ O) and silicon dioxide (SiO ₂) fumes, which are irritating. No toxic combustion by-products under normal storage.
Hazardous Reactions	No hazardous polymerisation. No self-reactive or explosive properties. Reaction with concentrated acids generates silicic acid / silica gel (exothermic); not a normal storage risk.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Classified Acute Tox. 4 (oral). Rat LD ₅₀ : ~770 mg/kg (literature value for sodium silicate solution; see supplier SDS for grade-specific data). H302 – Harmful if swallowed.
Acute Dermal Toxicity	No specific classification identified from reviewed data. Strongly alkaline; prolonged/repeated contact causes corrosive burns. Seek supplier/test data.
Acute Inhalation Toxicity	Classified STOT SE 3 (respiratory tract irritation). Mist or dust may irritate respiratory tract. H335 – May cause respiratory irritation.
Skin Irritation	Classified Skin Corr. 1 / Skin Irrit. 2 depending on concentration/grade. H314 – Causes severe skin burns (concentrated); H315 – Causes skin irritation (dilute). Strongly alkaline.
Eye Irritation	Classified Eye Dam. 1 / Eye Irrit. 2. H318 – Causes serious eye damage (concentrated); H319 – Causes serious eye irritation (dilute).
Sensitisation	No evidence of skin or respiratory sensitisation from available data.
Carcinogenicity	Not classified as carcinogen by IARC, NTP, ACGIH, or OSHA based on available data.
Mutagenicity	Not classified as a mutagen based on available data. No evidence of genotoxicity in standard tests.

SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity	Not classified for acute or chronic aquatic hazard based on available reviewed data. Sodium silicate raises solution pH, which may indirectly harm aquatic organisms at elevated concentrations. Avoid
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	uncontrolled release to water bodies. Obtain supplier or ecotoxicity data if required for registration.
Persistence / Degradability	Inorganic substance — not subject to biodegradation. Silicate dissipates by dilution and pH equilibration in natural waters.
Bioaccumulation	Not expected to bioaccumulate. Log Kow not applicable (inorganic ionic). BCF data not relevant.
Mobility in Soil	High mobility in soil when dissolved. May raise soil pH and affect soil chemistry at high loading. Prevent release to soil and groundwater.
Other Adverse Effects	Avoid uncontrolled release to the environment. Manage releases under applicable local environmental regulations.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste from Product	Dispose of contents through an authorised waste contractor in accordance with local, national, and international regulations. Do not pour concentrated solution into drains without neutralisation and compliance with trade effluent consent.
Contaminated Packaging	Empty containers may retain alkaline residues. Handle as hazardous until cleaned or disposed of through an approved route. Rinse containers thoroughly with water before disposal or recycling.
Indian Regulations	Follow Hazardous and Other Wastes (Management and Transboundary Movement) Rules 2016 and applicable State Pollution Control Board requirements. Assign waste code per actual process and local regulation.

SECTION 14 TRANSPORT INFORMATION

PARAMETER	UN / ADR (ROAD)	IMDG (SEA)	IATA (AIR)
UN Number	Not regulated (aqueous solution, typical grades)	Not regulated (aqueous solution, typical grades)	Not regulated (aqueous solution, typical grades)
Proper Shipping Name	Not applicable	Not applicable	Not applicable
Class	Not regulated	Not regulated	Not regulated
Packing Group	Not applicable	Not applicable	Not applicable
Marine Pollutant	No	No	No

IMPORTANT FLAG: The source SDS cited UN 1346 (Silicon powder, amorphous) and Class 4.1 (Flammable Solid) — this is INCORRECT for sodium silicate (CAS 1344-09-8), which is a non-flammable inorganic alkaline salt. Standard commercial sodium silicate



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aqueous solutions are generally not regulated as dangerous goods under ADR/IMDG/IATA. Concentrated or solid anhydrous grades may require classification as a corrosive (Class 8, UN 3262 Alkali metal silicate, solid) depending on concentration and regulatory jurisdiction. Verify with your freight forwarder and supplier SDS for the specific grade before shipment. UN 1346 and Class 4.1 data have been REMOVED from this revision as they are factually wrong for this substance.

SECTION 15 REGULATORY INFORMATION

EU / REACH / CLP	Sodium silicate (CAS 1344-09-8) is subject to REACH registration. Classified and labelled according to CLP Regulation (EC) No 1272/2008 as listed in Section 2. Observe all applicable REACH downstream user obligations.
OSHA (USA)	Prepared in OSHA HCS/HazCom aligned 16-section SDS format. Sodium silicate is listed on TSCA inventory. Verify SNUR status if importing into the USA.
India	Observe applicable rules under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules 1989 (amended), Environment Protection Act 1986, Factories Act 1948, Hazardous and Other Wastes Rules 2016, and applicable State Pollution Control Board requirements.
Other Jurisdictions	Canada WHMIS 2015/HPR: classify and label per Section 2 classification; Canadian sale may require bilingual SDS/label. China (GB Standards): use applicable GB/T SDS and classification requirements where marketed. Australia (AICS): check inventory status before export or import. GCC / Middle East: observe applicable GHS-aligned local requirements. Final market placement requires confirmation of local OELs, transport classification, waste code, and any additional restrictions.

SECTION 16 OTHER INFORMATION

Prepared By	Supreme Petro Chemicals — Technical Department
SDS Standard	UN GHS Rev.11 (2025); OSHA HCS/HazCom; EU CLP/REACH Annex II; Canada WHMIS/HPR — 16-section format
Revision Date	24 June 2026
Version	3.0 (supersedes prior issues)
Disclaimer	Information is given in good faith and believed accurate at issue. It does not constitute a specification or guarantee; the user is responsible for safe use, handling and compliance.



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FULL TEXT OF H-STATEMENTS

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 - H319 — Causes serious eye irritation
 - H335 — May cause respiratory irritation
-