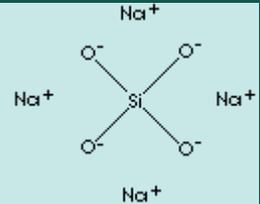


SODIUM SILICATES

PRODUCT IDENTIFICATION

CAS NO.	1344-09-8
EINECS NO.	215-687-4
FORMULA	$2\text{Na}_2\text{O} \cdot \text{SiO}_2$
MOL WT.	184.04
H.S.CODE	2839.19
TOXICITY	



SYNONYMS Water glass; Soluble glass; Silicate of soda; Silicic Acid Sodium Salt; Sodium silicate glass; Sodium Silicate Solution; Kieselsäure, Natriumsalz (German); ácido silícico, sal de sodio (Spanish); Acide silicique, sel de sodium (French);

DERIVATION fusing sand and sodium carbonate

CLASSIFICATION

GENERAL DESCRIPTION

Sodium silicate, also called water glass or Soluble Glass, is any one of several compounds containing sodium oxide, Na_2O , and silica, Si_2O , or a mixture of sodium silicates varying ratios of SiO_2 to Na_2O , solids contents, and viscosity. Traditionally, sodium silicates are classified according to the acid from which they are derived as Orthosilicate Na_4SiO_4 ; Metasilicate Na_2SiO_3 ; Disilicate $\text{Na}_2\text{Si}_2\text{O}_5$; Tetrasilicate $\text{Na}_2\text{Si}_4\text{O}_9$. They are also classified by an X-ray diffraction method according to their crystalline structure. All these compounds are colorless, transparent, glasslike substance available commercially as a powder or as a transparent, viscous solution in water. They can be dissolved in water to form a syrupy liquid. Some forms are slightly soluble, and some are almost insoluble; they are best dissolved by heating with water under pressure. The solutions are strongly alkaline. They are produced chiefly by fusing sand and sodium carbonate in various proportions. The use of sodium silicates is as a raw material for making silica gel. Also used in detergent; as a cement for glass, pottery, and stoneware; for fireproofing paper, wood, cement, and other substances; for fixing pigments in paintings and cloth printing; and for preserving eggs.

APPLICATIONS

- Silica gel production
- Builder or anti-soil-redeposition agent for detergent
- Peroxide stabilizer in bleaching for textile and pulp
- Solubilizer in ink, flux binder for welding rods
- Deflocculant for ceramic
- Buffer
- Fireproofing paper catalysts
- Water treatment
- Concrete hardner and acid-proof
- Petroleum processing by emulsion breaking and corrosion prevention
- Timber treatment

SALES SPECIFICATION

CULLED

LOW RATIO (2.3 - 2.5)

HIGH RATIO (3.3 - 3.5)

WATER GLASS				
PROPERTY	GRADE 169	GRADE159	GRADE138	GRADE126
SPECIFIC GRAVITY (at 20 C)	1.690 max	1.590 min	1.380 min	1.260 min
INSOLUBILITY	0.2% max	0.2% max	0.2% max	0.2% max
Na ₂ O	17 ~ 18%	14 ~ 15%	9 ~ 20%	6 ~ 7%
SiO ₂	36 ~ 38 %	34 ~ 36%	28 ~ 30%	23 ~ 25%
IRON DIOXIDE	0.05 % max	0.05 % max	0.03% max	0.03% max
TRANSPORTATION				
PACKING	In bag, In Drum, in Bulk			
HAZARD CLASS	8			
UN NO.	1719			
OTHER INFORMATION				
Hazard Symbols: C, Risk Phrases: 34/37, Safety Phrases: 13/24/25/36/45				