



POTASSIUM SILICATE

Technical Grades

Formula: K_2SiO_3
CAS # 1312-76-1

PRODUCT

Potassium Silicate

Grades PS1; PS 1 HS; PS2; PS3; PS4; PS5; PS6; PS7

Available in various silica/potassium oxide ratios and concentrations.

DESCRIPTION

Technical grade potassium silicates are water-soluble compounds primarily used in industrial applications. They are a combination of potassium oxide (K_2O) and silicon dioxide (SiO_2), resulting in a highly alkaline solution with a pH between 11 and 12. Available in various silica/potassium oxide ratios and concentrations, potassium silicate is known for its adhesive and water-repellent properties. It is widely used in applications such as concrete densification, wood treatments, welding rods, metal cleaning products as a corrosion inhibitor, and as a binder in industrial coatings and paints. It is also used in detergents, papermaking, and water treatment.

APPLICATIONS

- Inorganic paints, coatings and primers
- Anti-corrosive coatings
- Powder coatings
- Refractories
- Catalysts
- Concrete admixtures
- Concrete surface treatments
- Welding rod binder additive
- Flame retardant
- Ceramics, glazes and enamels
- Adhesive coatings
- Antifreeze formulations

TYPICAL SPECIFICATIONS

GRADES	Wt. RATIO $SiO_2:K_2O$ (+0.05)	Wt. %		DENSITY (Kg./Ltr.)	SOLIDS%	VISCOSITY (Sec.B4)
		K_2O (+0.50)	SiO_2 (+0.30)			
PS1	2.20-2.30	9.00	20.0	1.25-1.30	29.0-30.0	12-15
PS1 HS	2.10-2.30	13.00	28.00	1.39-1.40	40.5 - 41.5	35-40
PS2	2.0-2.10	13.00	27.0	1.35-1.40	40.0-41.0	16-17
PS3	1.80-1.90	14.50	26.5	1.37-1.40	40.5-41.5	17-18
PS4	2.10-2.20	11.50	24.0	1.30-1.35	36.0-37.0	15-16
PS5	2.48-2.52	8.25	20.6	1.24-1.27	29.0-30.0	14-16
PS6	2.50-2.60	7.60	20.00	1.22-1.25	28.0-29.0	13-15
PS7	2.52-2.56	8.45	21.30	1.25-1.27	29.0-30.0	13-15



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This document is subject to revision without notice as new data becomes available.

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PACKAGING

Available in 55-gallon polyethylene drums, 275-gallon IBC totes and bulk flexi tanks. Further packaging options may be available upon enquiry

STORAGE

Product should be stored in a cool and dry place in sealed, original containers away from direct sun light. Providing the product is kept in the original packaging, the shelf life is 12 months. Observe caution when handling corrosive materials.

SAFETY & HANDLING

Refer to the SDS for detailed safety, handling, and regulatory information.