POTASSIUM SILICATE POWDER

High-Purity Dry Silicate Matrix | Eco-Agricultural Nutrient | High-Temperature Refractory Binder

PRODUCT DESCRIPTION

Potassium Silicate Powder by XETEX Industries Private Limited is a rapidly soluble, high-purity dry silicate formulation engineered for applications requiring dry mixing or water-free processing. Featuring a high silica-to-potassium molar ratio (3.95), it delivers superior thermal stability, non-efflorescing cured characteristics, and robust binding capability. It is an indispensable raw material for dry-mix refractory mortars, specialized welding rod flux coatings, acid-resistant cements, and bioavailable agricultural nutrients.

TECHNICAL SPECIFICATIONS

PARAMETER / TEST PROPERTY	SPECIFICATION RANGE
Physical Form / Type	Powder
Colour / Appearance	White Powder
Odour	Odourless
Potassium Oxide (K_2O)	28.50 % ± 1.0 % w/w
Silicon Dioxide (SiO_2)	71.00 % ± 1.0 % w/w
Weight Ratio (SiO_2 : K_2O)	2.50 ± 0.05
Molar Ratio (SiO_2 : K_2O)	3.95 ± 0.05
pH (1% Water Solution)	11.00 – 12.00

KEY FEATURES & PERFORMANCE BENEFITS

- **High Solubility & Rapid Dissolution:** Dissolves easily in water to form clear, stable silicate solutions tailored to exact field concentration requirements.
- **Non-Efflorescing Matrix:** Prevents white carbonate bloom on cured surfaces, making it ideal for architectural dry-mixes, mineral paints, and decorative masonry coatings.
- **High-Temperature Heat Resistance:** Exceptional binding strength under extreme thermal conditions; ideal for refractory mortars and high-temp cements.
- **Bioavailable Agricultural Nutrient:** Premium water-soluble source of potassium (K_2O) and silicon (SiO_2) that strengthens plant cell walls, enhances stress tolerance, and boosts crop yield.
- **Freight & Handling Efficiency:** Concentrated dry form eliminates liquid transport costs, container freeze concerns, and extends shelf storage stability.

KEY APPLICATIONS

AGRICULTURE & BIO-STIMULANTS

REFRACTORY & INDUSTRIAL CEMENTS

Used in soluble dry fertilizer formulations, foliar sprays, and soil conditioners to deliver bioavailable silica and potash for enhanced drought, disease, and pest resistance.

Key dry binder component in high-temperature refractory mortars, chimney linings, acid-resistant mortars, and foundry mold/core binding systems.

WELDING ROD ELECTRODE MANUFACTURE

Acts as an essential dry flux matrix binder ensuring arc stability, smooth extrusion, and strong adhesion on welding electrode coatings.

SPECIALTY COATINGS & ADHESIVES

Inorganic binder for protective anti-corrosive coatings, mineral paints, silicate mortars, and fireproof insulation boards.

PACKAGING & STORAGE GUIDELINES

Packaging: Available in 25 kg HDPE bags with moisture-proof inner liner. Custom bulk packaging available upon request.

Storage & Shelf Life: Store in a cool, dry, well-ventilated area away from humidity, direct sunlight, and moisture. Keep bags tightly sealed when not in use. Under proper storage conditions, shelf life is 12 months from manufacturing date.

Disclaimer: The information contained in this Technical Data Sheet is based on our current technical knowledge and laboratory experience. It is provided in good faith without warranty, expressed or implied. Users should conduct their own tests to determine the suitability of the product for their specific intended application.