

INDUSTRIAL
CHEMICALS
DIVISION



PQ CORPORATION

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IN AUSTRALIA

PQ Australia Pty. Ltd.
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IN TAIWAN

PQ Silicates Ltd.
Phone: 886-2-2383-0515

PQ Corporation is a leading producer of silicate, zeolite, and other performance materials serving the detergent, pulp and paper, chemical, petroleum, catalyst, water treatment, construction, and beverage markets. It is a global enterprise, operating in 19 countries on five continents, and along with its chemical businesses, includes Potters Industries, a wholly owned subsidiary, which is a leading producer of engineered glass materials serving the highway safety, polymer additive, metal finishing, and conductive particle markets.

Bulletin 17-110

Lithium Silicates

PRODUCTS

LITHISIL® 25

Lithium Silicate
2.5% Li₂O, 20.5% SiO₂
% Solids = 23.0%
Weight Ratio = 8.2
Molar Ratio = 4.1
pH = 10.8
Specific gravity = 1.20
Density = 24.2°Bé
Viscosity = 20 cp

LITHISIL® 829

Potassium/Lithium Silicate
8.2% K₂O, 1.0% Li₂O, 20.5% SiO₂
% Solids = 29.7%
Weight Ratio = 2.5
Molar Ratio = 3.9
pH = 11.7
Specific gravity = 1.26
Density = 30°Bé
Viscosity = 34 cp

FEATURES & BENEFITS

- Lithium Silicate forms a stable high ratio, low viscosity solution.
- Once dried, Lithium Silicate is relatively insoluble compared to Potassium and Sodium Silicates.
- Efflorescence Scale: Li < K < Na
- Refractoriness: Lithium Silicates have higher melting points and may change the refractory properties of Sodium and Potassium Silicates.
- Adhesion: Addition of Lithium Silicate to Sodium or Potassium Silicates may improve the adhesion to various different surfaces.

POTENTIAL APPLICATIONS

- Concrete surface treatment
- Concrete admixture
- Coatings, usually as part of the binder system
- Welding rod binder additive
- Refractory applications
- Flame retardant
- Ceramics, glazes



Responsible Care®
Good Chemistry at Work



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