

# Elkon Products

## Silica Fume Data Sheet

### Features

- Added Cohesiveness
- Reduced Bleeding
- Enhanced Performance
- High Ultimate Compressive & Flexural Strength
- High Early Strength Gain for Faster Turnaround Time
- Low Permeability
- Increased Abrasion & Chemical Resistance

### Benefits

- Increased Concrete Service Life
- Improved Strength
- Increased Modulus of Elasticity
- Reduced Permeability Thereby Increasing Durability
- Increased Resistance to Sulfate Attack
- Increased Resistance to Alkali-Silica Reactivity
- Greatly Improved Freeze/Thaw & Scaling Resistance
- Improved Concrete Performance to Reduce Column Size, Increase Production & Lower Transportation & Erection Costs

### Elkon Silica Fume

Silica Fume is a very fine pozzolanic material composed of amorphous silica produced during the production of silicon or ferro silicon alloys.

It can be used in a variety of cementitious products such as concrete, grout, shotcrete and mortar.

Elkon Silica Fume is produced in conformance with ASTM C1240 and CSA A3001.

### Performance Characteristics

Elkon Silica Fume is a micro-filling material that physically fills the voids between cement particles. Elkon Silica Fume lowers permeability and reduces the size and number of capillaries that allow contaminants to enter the matrix.

Elkon Silica Fume reacts chemically within a cementitious matrix to increase the amount of calcium silicate hydrate (CSH gel) that is formed. The CSH gel is the bonding agent that holds the matrix of the cementitious mixture together in the hardened state. The additional CSH gel increases strength and decreases permeability.

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#### ★Applications★

★High Strength Concrete ★High Performance Concrete  
★Steel-Reinforced Concrete Structures ★Wet Shotcrete ★Low  
Permeability Concrete ★Parking Structures ★Bridge Decks  
★Marine Structures ★Mines ★Tunnels

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### Mixing & Handling

Recommended Dosage: 5 – 15% by mass of cement.

Refer to the Silica Fume Association User's Manual for storage, handling, batching and mixing instructions.

For material handling and safety information, refer to the Material Safety Data Sheet (MSDS).

For chemical and physical properties, refer to the monthly Mill Report.

Elkon Silica Fume is available in bulk, bulk bags or 11.34Kg (25 lbs) pulpable bags.