

# Silicamorf®90

## Silica Fume Mineral Powder Admixture

### Uses

- Any construction project requiring the protection provided by highly durable, low permeability concrete
- Projects requiring high-strength/high-performance concrete
- Steel-reinforced concrete structures or wet shotcrete applications exposed to deicing or airborne salts

### Advantages

- Increased concrete service life
- Increased strength
- Increased modulus of elasticity
- Reduced permeability thereby increasing durability
- Increased resistance to sulfate attack
- Increased resistance to alkali-silica reactivity

### Standards compliance

Silicamorf 90 conforms with ASTM C1240, Standard Specification for Silica Fume used in Cementitious Mixtures.

### Description

Silicamorf 90 dry, Powder silica fume admixture is formulated to produce extremely strong, durable concrete. Silicamorf 90 silica fume admixture meets the requirements of ASTM C 1240, Standard Specification for Silica Fume used in Cementitious Mixtures

### Typical dosage

Silicamorf 90 silica fume admixture is recommended for use in concrete and wet shotcrete applications at an addition dosage of 2-12% by mass of cement.

### Properties

Appearance	Light Gray Powder
Specific Gravity (kg/m <sup>3</sup> )	400-600
Structure	Amorphous
SiO <sub>2</sub> (Min%)	85
Specific Surface (m <sup>2</sup> /gr)	14-20
Bulk Density (kg/m <sup>3</sup> )	200-300
Particle Size	0.2-0.3

### Instructions for use

#### Compatibility:

Silicamorf 90 is compatible with other Capco admixtures used in the same concrete mix. All admixtures should be added to the mix separately and must not be mixed together prior to addition. The resultant properties of mixes containing more than one admixture should be assessed by the trial mix procedure recommended on this data sheet.

#### Dispensing:

The correct quantity of Silicamorf 90 should be measured by means of a suitably accurate device; and then added to the concrete during the mixing process either by hand, or mechanically.

#### Dispensing and Mixing:

For concrete and wet shotcrete, Silicamorf 90 silica fume admixture is batched at the concrete production plant in a manner similar to that for cement or other cementitious materials such as fly ash. It may be batched in a central or truck mixer. Follow the procedures outlined in ASTM C 94/C 94M, Standard Specification for Ready-Mixed Concrete or refer to the Silica Fume Association Users Manual for specific batching and mixing instructions.

#### Curing:

As with all structural concrete and sand : cement mixes, good curing practice should be maintained, particularly in situations where an overdose has occurred. Water spray, wet Hessian or a Capcure O spray applied curing membrane should be used.

### Packaging

Plastit WPL is available in:

- Big Bag (400 kg - 600 kg)
- Small Bag (30 kg - 50 kg)

### Storage

Silicamorf 90 has a minimum shelf life of 12 months at 35°C if kept in a dry store in the original, unopened packs. The shelf life will be reduced at higher ambient temperatures.

### Precautions

#### Health and safety:

Silicamorf 90 is alkaline and should not come into contact with skin and eyes. Avoid inhalation of dust during mixing. Gloves, goggles and dust mask should be worn. If contact with skin occurs, wash with water. Splashes to eyes should be washed immediately with plenty of clean water and medical advice sought.

#### Fire:

Silicamorf 90 is non-flammable.