

# Capcogel®

## Silicafume Gel 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

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

### Description

Capcogel admixture improves the rheological properties of concrete. It is based on a highly pozzolanic mineral admixture to produce extremely strong, durable concrete. These include silica fume and Super plasticizer. This product is offered in two different types. These include:  
 Capcogel S: based on sulphonated naphthalene superplasticizer  
 Capcogel D: based on polycarboxylate superplasticizer

### Typical dosage

The optimum dosage of Capcogel to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. The normal dosage range is:

Capcogel S: between 3 to 20% by mass of cementitious material

Capcogel D: between 4 to 20% by mass of cementitious material

### Properties

Appearance	Gray Gel
Microsilica (Min%)	40
Specific Gravity (gr/cm <sup>3</sup> )	1.3

### Instructions for use

#### Compatibility:

Capcogel 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 Capcogel 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.

#### 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

Capcogel is available in 20 kg pails or 200 kg Barrels.

### Storage

Capcogel has a minimum shelf life of 6 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:

Capcogel 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:

Capcogel is non-flammable.

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## Sample Test Results

**Table 1:**

Capcogel S Kg per 100 kg cement	All cementitious material	W/C ratio	Air content in fresh concrete (%)	Slump (cm)	Time (day)	
					7	28
					Compressive strength (MPa)	
0	375	0.42	3	3	23.28	38.92
5	365	0.39	2.6	2	32.84	43.86

**Table 2:**

Capcogel D Kg per 100 kg cement	All cementitious material	W/C ratio	Air content in fresh concrete (%)	Slump (cm)	Time (day)	
					7	28
					Compressive strength (kg/cm <sup>2</sup> )	
0	350	0.48	2	3	198	244
7	360	0.5	1.5	18	209	295