

ALPHA[®]

Silica Fume Gel



RAMKA
CONSTRUCTION
CHEMICALS

ALPHA[®] is a silica-fume slurry for improving concrete durability and reducing permeability. The silica-fume pozzolan increases concrete density, limits penetration of aggressive ions, and increases compressive, flexural and tensile strength. It is supplied as silica fume dispersed in water to avoid the handling and dispersion problems associated with adding dry silica fume directly to a truck mixer.

Applications

- HSC and HPC concrete
- Shotcrete, self-compacting concrete and repair concrete
- Water-resistant concrete
- Mass concrete with high abrasion resistance
- Blast-resistant concrete
- Concrete requiring high electrical resistivity

Approvals / Standards

- ACI PRC 234-06
- ASTM C1240
- ASTM C1202
- BS 1881-122
- INSO 2930
- BS EN 12390-8

Advantages / Benefits

- Reduces cement content
- Increases modulus of elasticity and compressive strength
- Reduces concrete permeability
- Facilitates pumping and reduces transfer-equipment costs
- Compatible with Portland cements
- Increases electrical resistivity and abrasion resistance
- Can be used with concrete plasticizers
- Improves resistance to aggressive agents
- Helps protect reinforcement from corrosion

Guideline for Use

During batching, mix ALPHA with the aggregate and 75% of the mixing water for 1 minute, add cement and mix for another 1 minute, then add the remaining 25% of the water and continue mixing for 7 minutes. A suitable plasticizer may be used for improved mixing. For a limited volume of ready-mixed concrete, add ALPHA to the truck mixer and mix at high speed for 7 minutes; a plasticizer may be added at the site for improved dispersion.

Dosage

Project-specific; consult RAMKA technical specialists. Simultaneous use with other concrete admixtures also requires technical consultation.

Product Data Sheet

ALPHA[®] SILICA FUME GEL SERIES

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Storage

+10°C to +30°C; store in dry conditions away from direct sunlight.

Packaging

20 kg pail

Shelf Life

1 year from the date of production in the original packaging.

Health and Safety

- In case of contact with the skin or eyes, rinse immediately with fresh water.
- Refer to the Material Safety Data Sheet (MSDS).

Basis Of Data

Product Information

chemical_base	Silica fume
density	1.45±0.05 g/cm ³
chloride_ion	None



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