PLUS®

Silica Fume Gel

RAMKA
CONSTRUCTION
CHEMICALS

PLUS® improves fresh-concrete rheology and hardened-concrete quality. Its polycarboxylate-ether superplasticizer reduces the water-cement ratio, while silica fume increases concrete density and resistance to chloride and sulfate ingress. Polypropylene fibers help control hairline cracking and improve impact and abrasion resistance.

Applications

- Highly durable, impermeable concrete
- High-strength, abrasion-resistant concrete
- Concrete production in hot weather
- Long-distance concrete transport, particularly in hot weather
- Hydraulic structures along the Persian Gulf
- Bridges, jetties, tanks, treatment plants and other hydraulic and marine structures
- Thin concrete sections
- Polymer tiles, cement plast and artificial stone
- Concrete resistant to explosion and nuclear radiation
- Industrial floors, runway ramps and airport aprons
- Concrete exposed to sulfate and chloride ions

Approvals / Standards

- ASTM C1202
- BS 1881-122
- INSO 2930
- BS EN 12390-8

Advantages / Benefits

- Reduces the concrete water-cement ratio
- Improves rheology and pumpability
- Increases abrasion and compressive strength
- Reduces alkali-aggregate reaction (AAR)
- Extends concrete setting time
- Produces a smooth finish on exposed concrete
- Supports economical mix designs exposed to impact, dynamic loading, sulfate and chloride attack

Guideline for Use

Add PLUS after all concrete constituents have been fully mixed and continue mixing until homogeneous, either at the batching plant or in the truck mixer at the site. Alternatively, blend it with part or all of the mixing water during concrete production.

Dosage

3 to 6% by weight of cementitious materials. Determine the exact dosage through site trials. Production of special concrete or any dosage change requires consultation with RAMKA technical specialists.

Storage

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

Packaging

22 kg pail

Shelf Life

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

Health and Safety

- Do not swallow and avoid contact with the eyes.
- In case of accidental contact with the skin or eyes, rinse immediately with plenty of fresh water.
- Non-flammable.

Basis Of Data

Product Information

Chemical base	Polycarboxylate ether and silica fume
Additional component	Polypropylene fibers
density	1.45±0.05 g/cm^3
Chloride ion	None

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