



FARCO GEL F1, F2

Admixture for High Performance Concrete

Product Description

- FARCOGEL F1, F2 are high performance modified admixtures, containing microsilica (highly reactive pozzolan), superplasticizer and some selected additives.
- FARCOGEL F1 is formulated for concretes with w/c ratio higher than 0.35.
- FARCOGEL F2 is formulated for concretes with w/c ratio lower than 0.35.
- The amorphous silica in FARCOGEL chemically reacts with the free calcium hydroxide which is liberated in the cement hydration process (Pozzolanic reaction) to produce additional calcium silicates.
- The dissolved superplasticizer in the FARCOGEL helps to reduce the w/c ratio and better dispersion of micro silica powder inside the slurry and the concrete. These two effects result in higher mechanical strength and lower permeability

Applications

- Precast concrete
- High performance concrete
- Bridges, water and sewage reservoirs, and tunnels
- Marine structures
- Water and sewage treatment plants
- Concretes facing to erosion and abrasion such as channels, Industrial floors,

Advantages

- Reduce bleeding and segregation
- Better workability and workability retention

tion at lower w/c ratio

- Increase compressive strength
- Reduce permeability against water, sulfate and chloride ions.
- High durability
- Improve abrasion resistance
- Improve resistance against freeze-thaw cycles

Standard Compliance

The used microsilica and superplasticizer are according to the following standards:

- ASTM C 494-Type F
- EN 2930- Table 3/4

General properties

Chemical composition	Combination of microsilica, superplasticizer, water and organic additives
Appearance	Grey thick Slurry
Specific Gravity(F1)	1.31 ± 0.02
Specific Gravity(F2)	1.36 ± 0.02
PH	10 ± 1
Chlorides(ppm)	500 Max

Microsilica Powder Analyze

SiO ₂	85-95%
Fe ₂ O ₃	04-2%
Al ₂ O ₃	05-1.7%
MgO	0.1-0.9%

Dosage

- F1, F2 is normally dosed at a rate of 6-12% by weight of cement

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- Dosage recommendations depend on the type of concrete, mix design, required microsilica and exposure area.

- Field testing is recommended to determine optimum dosage and effects on both plastic and hardened concrete properties, such as: workability and workability retention, setting time, early and ultimate strength.

Method of Use

- It can be added into the mixer at same time as the mixing water.

- F1, F2 may be added at the end of mixing process by dispensing equipment or it may also be added to the concrete in a drum of ready mix truck, it should be mixed at least 1 minute per m³ of concrete at high speed.

Compatibility

With Cements F1, F2 is suitable for use with cement replacement materials e.g. Fly ash, silicafume and blast furnace slag cement concrete.

With other Admixtures

F1, F2 should not be premixed or used with other admixtures unless receive the approval from manufacturer. We would recommend that SHIMISAKHTEMAN be consulted in such circumstances.

Packaging

FARCOGEL F1, F2 is supplied in 25kg buckets and 250kg drums

Storage

It is recommended to keep within the range of 5°C to 35°C. Keep out of direct sunlight.

Safety and Handling Precautions

Avoid contact with eyes and skin, use protective gloves and goggles.

Technical Service

The SHIMISAKHTEMAN Technical Service Department is available to assist you in the concrete problems in the field and correct use of our products



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