



FARCO PLAST P9-3R

High Range Water Reducer for Improving Concrete Slump Retention

Product Description

· FARCOPLAST P9-3R is a superplasticizer based on the third generation of polycarboxylates.

· P9-3R is produced to maintain slump for 45 minutes .

● Mechanism of Action

The two most important mechanism attributed to dispersion in polycarboxylate systems are linked to polymer adsorption and steric hindrance caused by the thickness of the adsorbed polymer layer on to the cement particle and repulsion through induced electrical electrostatic charge.

● Concrete Workability

The fluidified concrete remains workable for approximately 1-2 hours (at normal dosages) at 20°C (concrete temperature), at high dosages it can maintain the slump for long periods. Duration of workability depends not only on the temperature, but also on the type and brand of cement, the nature of the aggregates, the method of mixing, the method of transportation and the amount of added admixture.

● Applications

· FARCOPLAST P9-3R is recommended for use in all types of concrete including pumped, precast, silica fume flyash, extruded, prestressed, underwater, flowable and selfcompacting concrete.

· FARCOPLAST P9-3R is a suitable admixture for hot weather and long transportation concreting.

● Advantages

· Provides a cohesive non segregating concrete mixture

· Increase the slump of concrete from 2-6 to 10-20cm with few dosages.

· Improves impermeability against sulfate, chloride and water due to reduced water content

· Improves abrasion and frost resistance by decreasing W/CM

· Good workability retention and

· Improves pumping and consolidation

P9-3R is formulated to produce high workable concrete which is able to keep the slump for 45 minutes.

● Standard Compliance

FARCOPLAST P9-3R complies with

· ASTM C 494 -Type G

· ISIRI 2930 -Table 11 , 13

· EN 934-2 -Table 11.1 - 11.2

● General Properties

Chemical Composition	Modified polycarboxylate ether
Ionic nature	Anionic
Appearance	Opaque greenish liquid
Specific Gravity	Typically 1.05±0.02 at 20°C
Chlorides (PPM)	500 max

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● Dosage

- FARCOPLAST P9-3R is normally dosed at a rate of 0.4 - 2% by weight of CM).
- P9-3R is normally dosed at a rate of 100gr - 1600gr per 100kg of cementitious materials (0.1-1.6% by weight of CM).
- Dosage recommendations depend on the characteristics of the mix design.
- Field testing is recommended to determine the optimum dosage and effect on both plastic and hardened concrete properties such as : workability and workability retention, setting time, early and ultimate strength.

● Method of use

- FARCOPLAST P9-3R is supplied ready for use and is completely miscible in water.
- It can be added in to the mixer at the same time as the mixing water.
- It should not be added directly to the cement or dry materials.
- FARCOPLAST P9-3R 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

FARCOPLAST P10N is suitable for use with cement replacement materials e.g. Fly ash, silica fume and blast furnace slag cement

concrete.

With other Admixtures

FARCOPLAST P9-3R should not be pre-mixed or used with other admixtures unless receive the approval from manufacturer. We would recommend that SHIMISAKHTEMAN be consulted in such circumstances.

● Packaging

FARCOPLAST P9-3R is supplied in 20kg gallons, 220kg drums and 1100 kg IBC tanks.

● Storage

FARCOPLAST P9-3R Storage is recommended to keep within the range of 5°C to 40°C. If product has frozen, thaw and agitate until completely reconstituted. Keep out of direct sunlight.

● Shelf life

12 month when P9-3R is kept under the recommended conditions and stored in unopened and undamaged original sealed containers.

● Safety and Handling Precautions

FARCOPLAST P9-3R is a product classified as harmless, but in the line with general chemical handling precautions to avoid contact with skin or eyes, protective gloves and goggles should be worn.

● 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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