



FARCOPLAST PR

High Range Water reducing Admixture with an Exceptional Slump Retention Properties

Product Description

FARCOPLAST PR is FARCOPLAST PR is based on modified polycarboxylate ether, which is exceptionally formulated for long term slump retention properties. **PR** is recommended for concretes which slumps needs to be maintained from 2 to 6 hours

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 2-6 hours at 20°C (concrete temperature). 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

- Tremie concrete
- Hot weather concreting
- Suitable for cements with high slump losses
- Concrete containing fly ash or silica fume
- Blast furnace slag cement concrete
- Pumping concrete

Advantages

- Provides a cohesive non segregating concrete mixture
- Concretes with slump retention properties of 2 to 6 hours

- Improves impermeability against sulfate, chloride and water due to reduced water content
- Improves abrasion and frost resistance by decreasing W/CM
- **PR** is specially suitable for producing high workability concrete that has excellent workability retention, in this application, extension in setting time and little loss in early age compressive strength are observed.
- Reduced dosage range in comparison with conventional polycarboxylates.

Standard Compliance

FARCOPLAST PR 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 1.1±0.02 at 20°C
Chlorides (PPM)	500 max

Dosage

- **PR** is normally dosed at a rate of 0.5-1.4% by weight of cementitious materials weight.
- Dosage recommendations depend on the characteristics of the mix design.



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- 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 PR** 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 PR** 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 PR is suitable for use with cement replacement materials e.g. Fly ash, silica fume and blast furnace slag cement concrete.

With other Admixtures

FARCOPLAST PR 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

FARCOPLAST PR is supplied in 20kg gallons, 220kg drums and 1100 kg IBC tanks.

Storage

FARCOPLAST PR 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 **PR** is kept under the recommended conditions and stored in unopened and undamaged original sealed containers.

Safety and Handling Precautions

PR 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.