

Superplasticising admixture

Uses

- To produce pumpable concrete
- To produce high strength, concrete and reduction in water resulting in low permeability and high early strength
- To produce high workability concrete requiring little or no vibration during placing

Advantages

- Improved workability - Easier, quicker placing and compaction.
- Increased strength - Provides high early strength for precast concrete if water reduction is taken advantage of.
- Improved quality - Denser, close textured concrete with reduced porosity and hence more durable.
- Higher cohesion - Risk of segregation and bleeding minimised; thus aids pumping of concrete
- Chloride free - Safe in prestressed concrete and with sulphate resisting cements and marine aggregates

Standards

Conplast SP430N1 complies with IS:9103:1999 and BS:5075 Part 3 and ASTM-C-494 Type 'G' as a high range water reducing, retarding admixture

Description

Conplast SP430N1 is based on Sulphonated Naphthalene Polymers and is supplied as a brown liquid instantly dispersible in water.

Conplast SP430N1 has been specially formulated to give high water reductions without loss of workability or to produce high quality concrete of reduced permeability.

Properties

Specific gravity 1.2 - 1.22*

Chloride content NIL as per BS 5075

* The uniformity parameters like specific gravity, pH, chloride-content etc. will vary for specific customer requirements and mix design. Please refer our MTC issued for specific product configuration for measuring our product parameters that will be constantly and consistently administered.

Compatibility

Can be used with all types of cements except high alumina cement. Conplast SP430N1 is compatible with other types of Fosroc admixtures when added separately to the mix. Site trials should be carried out to optimize dosages.

Workability

Can be used to produce flowing concrete that requires no compaction. Some minor adjustments may be required to produce high workable mix without segregation.

Cohesion

Cohesion is improved due to dispersion of cement particles thus minimising segregation and improving surface finish.

Compressive strength

Early strength is increased upto 40 to 50% if water reduction is taken advantage of. Generally, there is improvement in strength depending upon W/C ratio and other mix parameters.

Durability

Reduction in W/C ratio enables increase in density and impermeability thus enhancing durability of concrete

Application instructions

Dosage

The optimum dosage is best determined by site trials with the concrete mix which enables the effects of workability, strength gain or cement reduction to be measured. Site trials with Conplast SP430N1 should always be compared with mix containing no admixture. As a guide, the rate of addition is generally in the range of 0.3 - 1.5 litres /100 kg cement.

Over dosage

An overdose of above the recommended level of admixture may result in high workability, slight increase in air entrainment and retardation of setting time. The ultimate strength of the concrete will not be adversely affected and will generally be higher than for normal concrete if the concrete is properly placed and cured.

Dispensing

The measured quantity of Conplast SP430N1 should be added along with the gauging water. For best results, add Conplast SP430N1 in the last phase after prewetting the mix with 80% of the total water required.

Mix design

Fosroc has an advisory service on Concrete Mix Design and can be contacted if assistance is required.

Conplast SP430N1

Estimating

Packaging

Conplast SP430N1 is supplied in 250kg barrel and Bulk Supply.

Storage

Conplast SP430N1 has a minimum shelf life of 12 months when stored under normal temperatures. It should be protected from extreme temperatures and preferably stored in shade.

Precautions

Health & Safety

Conplast SP430N1 is non-toxic. Any splashes on the skin should be washed immediately with water. Splashes to the eyes should be washed immediately with water and medical advice should be sought.

Fire

Conplast SP430N1 is non flammable.

Additional information

The Fosroc range of associated products includes high strength cementitious, epoxy grout, polyester resin based mortar for rapid presetting of steel shims to level or for direct bedding of small base plates; Resin Anchoring systems for same day anchoring of bolts in drilled holes in concrete or rock. Also available a range of products for use in construction; viz., curing compounds, release agents, flooring systems, repair mortars, sealants and waterproofing materials.

Separate datasheets are available on these products.