



Conplast® SP430(N1K1)

Superplasticising admixture

Uses

- To produce pumpable concrete
- To produce high strength, high grade of concrete by 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 SP430(N1K1) 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 SP430(N1K1) is based on Sulphonated Naphthalene Polymers and is supplied as a brown liquid instantly dispersible in water.

Conplast SP430(N1K1) has been specially formulated to give high water reductions upto 25% without loss of workability or to produce high quality concrete of reduced permeability.

Properties

| | |
|-------------------------|--|
| Specific gravity | 1.220 - 1.23 at 30°C |
| Chloride content | Nil. to IS:9103-99 |
| Air entrainment | Approx. 1% additional air is entrained |

Compatibility : Can be used with all types of cements except high alumina cement. Conplast SP430(NIK) is compatible with other types of Fosroc admixtures when added seperately to the mix. Site trials should be carried out to optimise 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 - 50% if water reduction is taken advantage of. Generally, there is improvement in strength upto 25% 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 SP430(N1K1) should always be compared with mix containing no admixture. As a guide, the rate of addition is generally in the range of 0.6 - 2 litres /100 kg cement.

Over dosing

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 SP430(N1K1) should be added along with the gauging water. For best results, add Conplast SP430(N1K1) in the last phase after prewetting the mix with 80% of the total water required.

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Mix design

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

Estimating

Packaging

Conplast SP430(N1K1) is supplied in 5,20,50 and 200 litre drums.

Storage

Conplast SP430(N1K1) 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 SP430(N1K1) 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 SP430(N1K1) 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.

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Important note :

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