

Superplasticising admixture

Uses

- To produce pumpable concrete
- To produce high strength concrete by substantial 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 compliance

Conplast SP430A2 complies with IS:9103:1999 and BS:5075 Part 3 and ASTM-C-494 Type 'G' as a high range water reducing admixture.

Description

Conplast SP430A2 is based on Sulphonated Naphthalene Polymers and is supplied as a brown liquid instantly dispersible in water.

Conplast SP430A2 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 | 1.265 - 1.280 at 27°C |
| Chloride content | Less than 0.05% |
| Air entrainment | Less than 1% over control |

Compatibility : Can be used with all types of cements except high alumina cement. Conplast SP430A2 is compatible with other types of Fosroc admixtures when added separately 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% if water reduction is taken advantage of. Generally, there is improvement in strength upto 20% 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 SP430A2 should always be compared with mix containing no admixture. As a guide, the rate of addition is generally in the range of 0.6 - 1.5 % by weight of cement.

Use at other dosages

Dosages outside the normal range quoted above can be used to meet particular mix requirements. Contact Fosroc for advice in these cases.

Effect of overdosage

A severe over dosage of Conplast SP430A2 will result in following :

- Increase in workability
- Retardation of initial and final setting times

If the concrete is properly cured the ultimate strength of concrete will not be adversely affected and will generally be higher than normal concrete.

Dispensing

The measured quantity of Conplast SP430A2 should be added along with the gauging water. For best results, add Conplast SP430A2 in the last phase after prewetting the mix with 80% of the total water required.

Conplast SP430A2

Mix design

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

Packaging

Conplast SP430A2 is supplied in 200 litre and 250kg.

Storage

Conplast SP430A2 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 SP430A2 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 SP430A2 is non flammable.

Important note :

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.



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