

Superplasticising admixture

Uses

- To produce pumpable concrete
- To produce high strength, high grade concrete M35 and above 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 SP435 complies to ASTM C 494 Type G as a high range water reducing retarding admixture.

Description

Conplast SP435 is based on modified sulphonated melamine polymers and is supplied as a brown liquid instantly dispersible in water.

Conplast SP435 has been specially formulated to give high water reductions upto 25% without loss of workability or to produce high quality concrete of reduced permeability.

Technical support

Fosroc provides a technical advisory service supported by a team of specialists in the field.

Properties

Specific gravity	1.200 - 1.210 at 27°C
Chloride content (IS:456 & BS:5075)	Nil.
Air entrainment	< 1% over control mix

Compatibility : Can be used with all types of cements except high alumina cement. Conplast SP435 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 by 15 to 20% if water reduction is taken advantage of. Generally, there is improvement in strength upto 20% depending upon water cement ratio and other mix parameters.

Durability : Reduction in water cement ratio enables increase in density and impermeability thus enhancing durability of concrete.

Instructions for use

Dosage

The optimum dosage is best determined by trials with the concrete mix which enables the effects of workability, strength gain or cement reduction to be measured. Site trials with Conplast SP435 should always be compared with mix containing no admixture.

As a guide, the recommended dosage is generally in the range of 0.6 to 2.0 ltrs / 100 kg cement.

Over dosing

An overdose of double the recommended amount of Conplast SP435 will result in very high workability and retardation of setting time.

Dispensing

The measured quantity of Conplast SP435 should be added along with the gauging water. For best results, add Conplast SP435 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® SP435

Estimating

Packaging

Conplast SP435 is supplied in 5, 20, 50 and 200 litre drums.

Storage

Conplast SP435 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 SP435 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 SP435 is non-flammable.

Additional information

The Fosroc range of associated products includes high strength cementitious and epoxy grouts, curing compounds, release agents, flooring systems, repair mortars, protective coatings, sealants and waterproofing.

Separate datasheets are available on these products.

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