

High performance, High Range Water Reducing & Retarding Admixture

Uses

- Suitable for high performance concrete
- To produce pumpable concrete
- To increase workability without extra water
- To improve cohesion, minimising segregation and give better finish
- Chloride free, safe for use in prestressed and reinforced concrete.
- Can be used with concrete containing microsilica and other cement replacements.
- Minimise permeability and increase the waterproofing properties of concrete.

Advantages

- **Improved workability** - Easier, quicker placing and compaction.
- **Increased strength** - Provides high early strength if water reduction is taken advantage of.
- **Improved quality** - Denser, close textured concrete with reduced porosity and hence enhanced durability.
- **Higher cohesion** - Risk of segregation and bleeding minimised; thus aids pumping of concrete

Standards compliance

Conplast SP430 G8 complies with IS:9103:1999 and BS:5075 Part 3 - 1985 and ASTM-C494M - 99a, 1999 Type 'G' as a high range water reducing admixture & IS 2645- 2003 as an integral waterproofing compound.

Description

Conplast SP430 G8 is based on Sulphonated Napthalene Polymers and is supplied as a brown liquid instantly dispersible in water.

Conplast SP430 G8 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	1.13 ± 0.02 at 27°C
Chloride content	Nil to BS:5075
Air entrainment	Less than 1% additional air is entrained

Compatibility : Can be used with all types of cements except high alumina cement. Conplast SP430 G8 is compatible with other Conplast 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 to 50% 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 SP430 G8 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% by weight of cement.

Over dosing

An over dose above the recommended level of admixture may result in high workability, air entrainment and retardation of setting time depending on the ambient temperature of cure. As such, more than the recommended dosage may be used if necessary by ascertaining the performance in the lab trials only before using in actual site conditions.

Dispensing

The correct quantity of Conplast SP430G8 should be used by means of a dispenser. The measured quantity of Conplast SP430G8 should be added along with a part of gauging water in case of batching plants. Alternatively, correct dosage should be used with about 20% of the total water in the last phase after the mix has been prewetted.

Conplast SP430 G8

Mix design

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

Estimating

Packing

Conplast SP430 G8 is supplied in 5,20 and 200 litre drums.

Storage

Conplast SP430 G8 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 and Safety instructions

Conplast SP430 G8 is non-toxic. Any splashes on the skin should be washed immediately with water. Splashes on the eyes should be washed immediately with water and medical advice should be sought.

Fire

Conplast SP430 G8 is non flammable.

Additional information

The Fosroc range of associated products include 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., admixtures, curing compounds, release agents, flooring systems and repair mortars.

Separate datasheets are available on these products.