



Conplast® SP430MS

High range water reducing and slump retaining 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 like PFA, GGBS, Metakaolin etc.

Advantages

- **Improved workability** - Easier , quicker placing and compaction.
- **Increased strength** - Provides high early strength if water reduction is taken advantage of.
- **Increased 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 SP430MS complies with IS:9103:1999 and BS:5075 Part 3 - 1985, and ASTM-C494M - 99a, 1999 Type 'F' and Type 'G' depending on the dosage used.

Description

Conplast SP430MS is based on Sulphonated Napthalene Polymers and is supplied as a brown liquid instantly dispersible in water.

Conplast SP430MS 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

Chloride content	Nil to BS5075
Air entrainment	Approx. 1.0% additional air is entrained

Compatibility : Can be used with all types of cements except high alumina cement. Conplast SP430MS is compatible with other Conplast 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 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. As a general guideline, for normal grade of concrete a dosage from 0.6% to 1.2% by weight of cement is recommended, the dosage may be increased to 1.6% by weight to achieve specific slump requirements.

For a high performance concrete containing Microsilica where a high amount of water reduction and slump retention are required, dosages upto 2.5% to 3.0% by weight of cementitious materials may be required to create effective dispersion of Microsilica particles. However to arrive at the optimum dosage, site trials needs to be carried out as the dosage will greatly depend on the mix design and performance required at site.

Use at other dosages:

Dosages outside the typical ranges quoted above can be used to meet particular mix requirements. Contact Fosroc.

Overdosage

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 be generally higher than that of normal concrete if properly placed and used.

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Dispensing

The correct quantity of Conplast SP430MS should be used by means of a dispenser. The measured quantity of Conplast SP430MS 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.

Mix design

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

Estimating

Packing

Conplast SP430MS is supplied in 5,20 and 200 litre drums.

Storage

Conplast SP430MS 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 SP430MS 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 SP430MS is non flammable.

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