

## High performance water reducing and superplasticising admixture

### Uses

- To produce pumpable concrete
- To produce high strength, high grade 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

Conplast SP500 KL complies with IS:9103:1999(2007) and conforms to ASTM-C-494 Type 'G'.

### Description

Conplast SP500 KL is based on Sulphonated Napthalene Polymers and is supplied as a brown liquid instantly dispersible in water.

Conplast SP500 KL has been specially formulated to give higher water reductions without loss of workability or to produce high quality concrete of reduced permeability.

### Properties

|                  |                |
|------------------|----------------|
| Specific gravity | 1.180 - 1.20 * |
| pH at 27°C       | Minimum 6*     |
| Chloride content | Nil to IS:456* |

\* The uniformity parameters like specific gravity, pH, chloride content etc. will vary for specific customer requirements and mix design. Please refer our MTC issued for specific product configuration for measuring our product parameters that will be constantly and consistently administered.

**Compatibility :** Can be used with all types of cements except high alumina cement. Conplast SP500 KL 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 will increase if water reduction is taken advantage of. Generally, there is improvement in strength 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

Trials need to be carried out at site to determine the exact dosage of the admixture for the particular mix design and materials. However for normal grades of concrete a dosage from 0.5% - 1.2% by weight of cementitious material is recommended, the dosage may be increased to 1.5% to achieve specific slump requirements. For microsilica concrete where a high amount of water reduction and slump retention are required, trials need to be carried out to arrive at the correct dosage, as the dosage may increase upto 2.0% or even upto 2.5% by weight of cementitious material depending on mix design and performance required.

### Use at other dosages

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

### 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 generally be higher than for normal concrete if properly placed and cured.

### Dispensing

The measured quantity of Conplast SP500 KL should be added along with the gauging water. For best results, add Conplast SP500 KL in the last phase after prewetting the mix with 80% of the total water required.

# Conplast SP500 KL

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## Mix design

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

## Estimating

## Packing

Conplast SP500 KL is supplied in 250 Kg drums or bulk.

## Storage

Conplast SP500 KL 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 SP500 KL 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 SP500 KL is non flammable.