

High performance superplasticising admixture

Uses

To provide increased ultimate strength gain by significantly reducing water demand in a concrete mix. To significantly improve the workability and retention of site mixed concrete without increasing water demand

To provide improved durability by increasing ultimate strength and reducing concrete permeability

Advantages

Makes possible major reductions in water cement ratio which allows the production of high strength concrete without excessive cement contents.

Increased workability levels are maintained for longer than with ordinary sulphonated melamine and naphthalene admixtures

Improved cohesion and particle dispersion minimises segregation and bleeding and improves pumpability. Chloride free, safe for use in prestressed and reinforced concrete.

Standards compliance

Conplast SP430 ES2 complies with IS9103:1999, BS 5075 Part 3 and with ASTM C494 Type 'F' and G admixture depending on dosage used.

Description

Conplast SP430 ES2 is a chloride free, superplasticising admixture based on selected sulphonated naphthalene polymers. It is supplied as a brown solution which instantly disperses in water.

Conplast SP430 ES2 disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively. The very high levels of water reduction possible allow major increases in strength to be obtained.

Technical support

Fosroc provides a technical advisory service for on-site assistance and advice on mix design, admixture selection, evaluation trials and dispensing equipment.

Typical dosage

The optimum dosage of Conplast SP430 ES2 to meet specific requirements should always be determined by trial mixes using the materials and conditions that will be experienced in use.

For high strength, water reduced concrete the normal dosage range is from 0.6 - 1.5 litres/100kg of cementitious material, including PFA, GGBFS and microsilica.

Use at other dosages

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

Properties

Appearance	Brown liquid
Specific Gravity	1.238 - 1.240 *
Chloride content	Nil to BS 5075 *
Air entrainment	Typically less than 2% additional air is entrained at normal dosages.
Alkali content	Typically less than 72.0g Na ₂ O equivalent per litre of admixture.

* 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.

Instructions for use

Mix design

Where the main requirement is to improve strengths, initial trials should be made with normal concrete mix designs. The addition of the admixture will allow the removal of water from the mix whilst maintaining workability. After initial trials, minor modifications to the overall mix design may be made to optimise performance. When the main requirement is to provide high workability concrete, the mix design should be one suitable for use as a pump mix.

Compatibility

Conplast SP430 ES2 is compatible with other Fosroc admixtures used in the same concrete mix. All admixtures should be added to the concrete separately and must not be mixed together prior to addition. The resultant properties of concrete containing more than one admixture should be assessed by trial mixes.

Conplast SP430 ES2 is suitable for use with all types of ordinary portland cements and cement replacement materials such as PFA, GGBFS and microsilica.

Dispensing

The correct quantity of Conplast SP430 ES2 should be measured by means of a recommended dispenser. Normally, the

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admixture should then be added to the concrete with the mixing water to obtain the best results.

Effects of overdosing

An overdose of double the amount of Conplast SP430 ES2 will result in an increase in retardation as compared to that normally obtained. Provided that adequate curing is maintained, the ultimate strength of the concrete will not be impaired by increased retardation and will generally be increased. The effects of overdosing will be further increased if sulphate resisting cement or cement replacement materials are used.

Over dosage may also cause increased air entrainment, which will tend to reduce strength. The degree of this effect will depend on the particular mix design and overdose level.

Estimating

Packaging

Conplast SP430 ES2 is available in 200 liters 250 kg drum or bulk supply.

Storage

Conplast SP430 ES2 has a minimum shelf life of 12 months provided the temperature is kept within the range of 20°C to 50°C.

Freezing point : Approximately -2°C.

Precautions

Health & Safety

Conplast SP430 ES2 is non hazardous. However it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed, seek medical attention immediately - do not induce vomiting.

Fire

Conplast SP430 ES2 is water based and non flammable.

Cleaning and disposal

Spillages of Conplast SP430 ES2 should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Remnants should be hosed down with large quantities of water.

The disposal of excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.

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