

Product Description

Techno HyperCrete S40 is a new generation hyperplasticiser based on modified polycarboxylic ether. The unique mechanism of action of polycarboxylic ether present in Techno HyperCrete S40 greatly enhances the effectiveness of cement dispersion and thereby reducing the amount of water required for mixing. Techno HyperCrete S40 is chloride-free and compatible with all types of cement.

At the very early stage of the mixing process, the PCs are adsorbed by the cement granules, increasing their negative charge, thus causing electrostatic dispersion. But then, the side chain linked to the polymer backbone generates a steric hindrance that greatly enhances the ability of cement grains to disperse and remain separate. Steric hindrance provides a physical barrier along with the electrostatic barrier between the cement particles, resulting in flowable concrete with great reduction in water content and long term dispersibility.

Standard

Conforms to IS:9103-1999 (reaffirmed 2004), Edition 2.2 (2007 – 2008), ASTM C494, Type F & G

Uses

Techno HyperCrete S40 is used to increase workability without loss of strength or to enable water reduction for the same workability resulting in dense rheodynamic concrete with high ultimate strength. This product is very useful in producing high flowable concrete with high water reduction and extended working time.

Suitable for concrete in strength class of M40 grade and higher

Properties

Form	Light Yellow Liquid
Specific Gravity	1.07 ± 0.02 (at 27°C ± 3 °C)
Setting & Hardening	Sets very early with moderate dosage. There may be retarding effect on the setting time with high dosage.
Chloride Content	NIL.
Air Entrainment	May increase very marginally
Compatibility	Can be used with all types of Portland and Slag cements including Microsilica, fly ash, GGBFS
pH ±1	7

Advantages

- Substantial improvements in workability and flow properties without increased water.
- The internal friction and thixotropy of mix is reduced to a minimum without the risk of segregation, thus making concrete pumping more efficient
- Very significant water reduction minimizes shrinkage cracking thereby producing close textured impervious/impermeable concrete with improved durability and surface finish. Suitable for use in most types of concrete above and below ground subjected to water pressure and aggressive atmospheric conditions. Reduction in concrete permeability protects against water migration and corrosion of embedded steel
- Bond strength of concrete to reinforcement steel is considerably increased

Consistency

TechnoHyperCreteS40 is formulated from carefully selected raw materials and is manufactured under controlled strict quality condition to produce a consistent product.

Dosage

The optimum dosage should be determined by site trial with the particular concrete mix. As a guide the rate of addition is generally in the range of 300 to 750ml per 50kg of cement depending on the function. Arriving at right dosage depends on water cement ratio, cement content and other desired properties as per the site condition. The plasticizing-cum-water reducing properties are improved if the admixture is added to moist concrete after adding 60-70% of mixing water. Addition of TechnoHyperCrete S40 to dry cement or aggregate is not recommended.

Over dosage of Techno HyperCrete S40 may result into segregation/bleeding of mix, delayed initial/final set, increased plastic shrinkage, air entrainment, etc

Methods of Use

Techno HyperCrete S40 is supplied ready for use. For maximum dispersion throughout the mix, measured quantity of Techno HyperCrete S40 should be added directly into the mixer at the same time as the mixing water. On no account should be added to the dry cement. Precautions

Estimating

Packaging

Techno HyperCrete S40 is supplied in 250kg carboys

Storage

Shelf Life

TechnoHyperCrete S40 has a shelf life of 18 months from the date of manufacture provided the temperature is within the range of 20°C to 40°C. It is recommended that the drums be stored in shade.

Health & Safety

TechnoHyperCrete S40 is non-toxic, non-flammable and splashes to the skin should be washed with copious amounts of water.

If contact with eyes occurs, wash well with water immediately and seek medical advice.

Warning

Although the technical details mentioned in the datasheet are recommended to the best of our experience & knowledge, information must be taken merely indications. Practical trials have to be conducted at site for arriving the optimum dosage. In every case, the user alone is fully responsible for any consequence deriving from the use of the product

Important: Technokem products are guaranteed against defective materials and are sold subject to its standard terms and conditions of sale. It is the Customer's responsibility to satisfy themselves by checking with the Company whether the information is still current at the time of use. The customer must be satisfied that the product is suitable for the use intended. All products comply with the properties shown on current Technical Literatures. However, Technokem does not warranty or guarantee the installation of the products as it does not have any control over installation or end use of the product. All information and particularly the recommendation relating to application and end use are given in good faith.

For Complaints/Suggestions:

Please write to our Customer Care Executive at

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