

HI-FORZA A390

(High early strength, High range water reducing, Hyper plasticizer, Admixture for Precast)

DESCRIPTION

HI-FORZA A 390 is new generation Polycarboxylate - based Water reducing admixture which enables concrete to be produced with very low water to cement ratios. HI-FORZA A 390 has been formulated to achieve high early strengths while imparting extreme workability without segregation to concrete. HI-FORZA A 390 does not contain added Chlorides and will not promote corrosion in steel.

USES

- HI-FORZA A 390 is suitable for making precast concrete elements at all workability's including Low-slump or Super workable concrete having fluid consistence, no segregation, a low water binder ratio and, consequently high early and long term strengths
- HI-FORZA A390 may be used for producing conventional concrete, capable of self- compaction, even in the presence of dense reinforcement without the aid of vibration, for making precast elements.

FEATURES AND BENEFITS

- Achieve high early strengths
- Produces cohesive concrete even while having a low water cement ratio
- Optimizes curing cycles by reducing curing time or curing temperatures
- Eliminate heat curing
- Eliminate the energy required for placing, compacting & curing
- Increase productivity/ reduction in cycle time
- Improve surface appearance
- Produce durable precast concrete elements

TECHNICAL DATA

| | |
|-----------------------|---------------------------|
| Aspect | : Golden/Yellowish Liquid |
| Relative Density | : 1.09 to 1.11 at 25°C |
| pH | : Above 6 |
| Chlorideion content : | Nil |

APPLICATION

HI-FORZA A390 is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticizing effect and water

- Improved engineering properties, compared to traditional superplasticizer such as early and ultimate compressive and flexural strengths, reduced shrinkage and low permeability.

CHEMISTRY AND MECHANISM OF ACTION

HI-FORZA A390 has a different chemical structure from the traditional PCE polymer based superplasticizers. It initiates the same electrostatic dispersion mechanism as the traditional hyperplasticisers, but the short main chains facilitate quick start of hydration process. As a result it is possible to obtain earlier development of the heat of hydration, rapid strength development of the hydration products and as a consequence, higher strengths at a very early age.

DOSAGE

Optimum dosage of HI-FORZA A390 should be determined in trial mixes. As a guide, a dosage range of under 1.2% of cementitious material is normally recommended. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your HI-BOND representative. reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of HI-FORZA A390 to dry aggregate or cement is not recommended.

Thorough mixing is essential and a minimum mixing cycle, after the addition of HI-FORZA A390, of 60 seconds for forced action mixers is recommended

COMPATIBILITY

HI-FORZA A390 is compatible with all series of HI-FORZA.

It must not be used in conjunction with any other admixture unless prior approval is received from HI-BOND Technical Services Department.

STORAGE /SHELF LIFE

Store tightly sealed containers at room temperature. Self-life of properly stored material is one year from the date of manufacture.

WORKABILITY

HI-FORZA A390 ensures that rheoplastic concrete remains workable in excess of 30 minutes at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability.

PACKAGING

HI-FORZA A390 is supplied in 225 kg drums or in bulk on request.

STANDARD COMPLIANCE

HI-FORZA A390 complies with **IS 9103 1999(2007)**

This Product is Formulated and Labelled and Commercial use only
For Best Results and Safest Usage, User is Specialty Directed to Consult.

Product Warranty: All recommendations, statements and technical data contained herein are based on tests we believe to be reliable and correct, HI BOND warrants its products to be free of mfg. Defects and that, at the time and place of shipment, our material will meet current published physical properties when applied within HI BOND'S directions and tested in HI BOND'S standards. HI BOND'S facility is limited to replacement of material found to be defective. As HI BOND has no control over the use to which others may put its products. It is recommended that the product be tested to determine if suitable for a specific application and / or our information is valid in particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, applications and proper installation of each product. Nothing contained herein shall be construed to be a recommendation to use or as a license to operate under or to infringe any existing patents.