



# STAR - 312

ANTICORROSSIVE, WATER REDUCING, HIGH RANGE SUPERPLASTICISER

## DESCRIPTION

Brown solution based on selective Polymers to produced high workability concrete without loss of strength. It promotes high and early ultimate strength by taking advantage of water reduction whilst maintaining workability.

## ADVANTAGES

- **Anticorrosive:** Helps to produce corrosion free structure.
- **Bleeding and segregation minimized:** Produces high quality concrete of improved durability and impermeability.
- **Increased Strength:** Provides high early strength for pre-cast concrete with the advantage of higher water reduction ability.
- **Improve workability:** Increased workability reduces placing time and labor cost.
- **Improve Quality of Concrete:** Denser, close textured concrete with reduced porosity and hence more durable.
- **Chloride Free:** Safe in pre-stressed concrete and with sulphate resisting cement and marine aggregates.
- **Higher Cohesion:** Cohesion is improved due to dispersion of cement particles. Minimize segregation and finish of concrete surface.

## USES

- High early and ultimate strength concrete
- High performance concrete for durability
- To produce high workability concrete requiring little or no vibration during placing.
- High workability without segregation or Bleeding.
- Pre-cast & Pre-stressed concrete
- Concrete containing pozzolans such as micro silica, GGBFS, PFA including high volume fly ash concrete.

## STANDARDS COMPLIANCE

- ASTM C494 Types F
- EN 934-2 T3.1/3.2
- IS 9103:1999
- IS: 456

## TYPICAL PROPERTIES

Appearance	: Brown liquid;
Chloride ion content	: Nil
Specific gravity	: 1.20 kg/l at 20 <sup>0</sup> C;
Chloride content	: 0.0 %; IS :456
Alkali content	: < 72 gr.Na <sub>2</sub> O equiv./l

## COMPATIBILITY

It can be used with all types of cement except high Alumina cement..Site trial should ber carried out to optimise dosages.

- **Workability:** Can be used to produce flowing concrete requires no compaction.Some minor adjustments may ber required to produce high workable mix without segregation.
- **Water Content:** Mixe 20-25% less water than required.
- **Cohesion:** Cohesion is improved due to dispersion of Cement particles thus minimizing segregation and improve surface finish.
- **Compressive strength:** Early compressive streng is increased upto 20% if water reduction is taken advantage of.Generally,there is improvement of strength upto 20% depending upon water to cement ration and other mix parameters.
- **Durability:** Reduction in water to cement ration enables increase in density and impreability thus enhancing durability of concrete

## APPLICATION INSTRUCTIONS

### Dosage:

The optimum dosage is best determined by site trials with the concrete mix that enables the effect of workability, strength gain or cement reduction to be measured. Site trial with this product should always be compared with mix containing no admixture. As a guide the rate of addition is generally in the range of 0.5-to 2-litres/100 kg of Cement.

### Over Dosing:

An over dose of double the recommended amount of this product will result in very high workability and some retardation of setting time will occur. However, the ultimate compressive strength will not be impaired.

**Dispensing:**

The measured quantity of this product should be added along with the gauging water. For best result, add this product in the last phase after pre-wetting the mix with 80% of the total water required.

**Mix Design:**

STAR has a dedicated advisory service on concrete mix Design and can be controlled if assistance is required

**STORAGE**

This product has a minimum shelf life of 12 month when stored under normal temperature. It should be protected from extreme temperatures. It should be protected from extreme temperature and preferably stored in shad

**PRECAUTIONS**

STAR – 312 is safe, non-toxic, and eco-friendly and presents no health hazard. As with all chemicals, caution should always be exercised. Protective clothing such as gloves and goggles

**INHALATION:** Inhalation of vapor or mist should be avoided. Symptoms include coughing, wheezing, laryngitis, and shortness of breath, headache, nausea, and vomiting. Immediately shift victim to fresh air, and, if needed immediately start artificial respiration. Give oxygen if breathing is labored. Get emergency  
**EYE CONTACT:** Flush eyes with water for 15 minutes and call for medical help.

**INGESTION:** causes nausea, vomiting, and loss of consciousness. If accidentally swallowed do not induce  
**SKIN CONTACT:** Flush with water or soap and water until all traces have been removed. Seek medical attention if required.

Technical Support:



& Polymertech UK Ltd.  
CN-07468396  
United Kingdom

**NOTE:-** We make no warranty either expressed or implied or statutory in this document except as expressly stated in any sale and purchase agreement entered into between the buyer and us. This document is a technical data information sheet. The information given in this sheet is to the best of our knowledge, true and accurate. However buyers are requested to confirm the same in their laboratories as test results may vary between two laboratories due to change in test conditions, purity of chemicals and personal error of chemists. Under the above conditions we are not liable for special, incidental or consequential damage.

**For further assistance kindly mail us :** support@starcoating.in

**Marketed By:**



**Star Coatings & Membranes Pvt. Ltd.**

New Delhi-110025, visit us at : www.starcoating.in, E-mail: info@starcoating.in



(ISO 9001:2000)