



STAR 321

**HIGH EARLY STRENGTH NEW GENERATION
ANTICORROSIVE POLYMERIC SUPER PLASTICISER
FOR PRECAST CONCRETE APPLICATION**

DESCRIPTION

STAR – 321 is polymer engineered specifically towards the pre-cast concrete industry to produce the highest possible early age strength gain, with the lowest possible cementitious content.

STAR – 321 is a new generation polymeric superplasticiser/high range water reducer based on nano technology

STAR – 321 has the effects of Steric and Electrostatic repulsion that helps in producing a product, which is more effective than conventional superplasticisers.

STAR – 321 does not contain any added chloride ions ensuring that the product does not support corrosion of reinforcing steel. Being anti corrosive in nature, helps concrete and steel to prevent corrosion.

ADVANTAGES

- STAR – 321 provide early age compressive strength developments that improve productivity, earlier transfer of pre-stress and negate the need for accelerating admixtures during cold temperature working.
- STAR – 321 provides better consistency, requires little or no vibration in highly workable concretes.
- STAR – 321 reduce surface cohesion makes concrete floating and finishing requires less labour involvement.
- STAR – 321 improves rheology of concrete provides a blemish free surface finish, requiring less repair work.
- STAR – 321 is chloride free, ideal for concrete containing embedded steel.
- STAR – 321 is Anticorrosive in nature, neither initiates nor promotes corrosion.
- Allows workability to be increased without adding extra water

USES

STAR – 321 is specially formulated to produce Self Compacting Concrete (SCC), specially for pre-cast application with excellent flow and very high early strength gain.

STAR – 321 reduce surface voidage due to controlled thixotropic flow, exhibiting latent energy, which maximises spread of flow without exhibiting signs of bleed and segregation

STAR – 321 produce highly workable flowing concretes at comparatively low, water cement ratios providing ease of mould filling and requires less workmanship.

STAR – 321 is very helpful in dense reinforcement conditions.

STAR – 321 helps to reduce water cement ratio in concrete mixes, which increases long-term durability, impermeability and resistance to sulfate attack.

TYPICAL PROPERTIES

Appearance	: Brown liquid
Specific gravity	: 1.18 kg/lit.at 20°C
Chloride content	: Nil to IS : 456
Air entrainment	: Less than 1%
PH by ph meter	: 8

STANDARDS COMPLIANCE

ASTM C-494 Type C

EN 934-2: T6 & T7

IS 9103: 1999

IS 456

COMPATIBILITY

STAR – 321 is suitable for use with all types of Portland cements and combination materials such as fly ash, PFA, GGBS limestone fines and micro silica.

APPLICATION INSTRUCTIONS

Dosage

The optimum dosage determined by site trails with a specific concrete mix which enables the effects of workability, strength gain and setting time to be measured.

The rate of addition of STAR – 321 is typical between 450 to 950 ml per 100 kg cement.

Mixing

STAR – 321 should be stirred before use.

STAR – 321 is a ready-to-use liquid, which is dispensed into the concrete together with the mixing water.

The dispersing of admixture shall be more uniform if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of STAR – 321 to dry aggregate or cement is not recommended.

CURING:

Normal curing methods such as water pounding/ spray or wet Hessian must be used.

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 shade.

PRECAUTIONS

STAR – 321 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

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(ISO 9001:2000)