



STAR 310

ANTICORROSSIVE, SET REDUCING,
SUPERPLASTICISING ADMIXTURE

DESCRIPTION

STAR – 310 is a high performance set reducing, superplasticising admixture for use in concrete and Portland cement.

STAR – 310 admixture helps in reducing setting times in general and specially in lower atmospheric temperature, produce early high and ultimate increased strengths. It reduces bleed and segregation and improves workability too.

STAR – 310 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

- Increased Strength without increase in cement content.
- Improved Durability by increasing density and lowering permeability.
- Speeds Up Constructions.
- Extended setting times at higher dosage.
- Compatibility with all types of Portland cements.
- Chloride free. It is safe in pre-stressed concrete and with sulphate resisting cements.
- Reduced segregation.
- Produces high early strengths.
- Increase workability and increased strengths.
- **Corrosivity - Non-Corrosive.**
- Suitable for bricklaying mortar mixes.

USES

To accelerate the setting and early strength gain of Portland cement concrete and mortar mixes without the introduction of chloride. Acts as a plasticiser, so gives significant increases in both ultimate and early strengths. Typical applications include pre-cast concrete, concrete placed in cold weather, concrete for repairs, mortars for brickwork.

STAR – 310 is designed for use as accelerator to provide high early and higher compressive strengths in concrete; it accelerate the setting times.

TYPICAL PROPERTIES

Appearance	: Brown liquid
Specific gravity	: 1.18 kg/lit.at 20°C
Chloride content	: Nil to BS 5075
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
BS 5075 Part 1

COMPATIBILITY

STAR – 310 is compatible with most admixtures used in the production of quality concrete including normal, other mid-range water-reducing admixtures, accelerators, retarders.

The effect of STAR – 310 is dependent upon the cement properties and the type of plasticizers used in the concrete mix. The setting time and early strength gain may be affected if strong retarders are used in the mix. STAR – 310 admixture will neither initiate nor promote corrosion of reinforcing steel, pre-stressed concrete or concrete placed on galvanized steel floor and roof systems.

Rate of hardening

The temperature of the concrete mix and the ambient temperature (forms, earth, reinforcement, air, etc.) affect the hardening rate of concrete. Within the normal dosage range, it will generally reduce the setting times of concrete containing normal portland cement approximately by 1 hour to 3 hours compared to a plain concrete mix, depending on materials at site and temperatures. Trial mixes should be made with site materials & approximating the job site conditions to determine the dosage required.

It is strongly recommended that concrete should be properly cured particularly in windy and dry climates.

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 – 310 is typical between 160 ml to 400 ml per 100 kg cement.

At dosage beyond 400 ml per 100kg of cement, it may act as a retarding plasticiser.

Over dosage

An overdose of double the recommended amount of STAR – 310 will result in a slight increase in initial acceleration, but will not alter the strength or characteristics of the cured concrete or mortar.

Mixing

STAR – 310 should be stirred before use.

STAR – 310 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 – 310 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.

SAFETY

STAR – 310 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)