

TECNOS[®] 101

Superplasticising Admixture for Pavement Quality Concrete



Tecnos[®] 101 is a latest generation admixture based on the Sulphonate Naphthalene Polymers supplied as a brown liquid. It is easily dispersible in water.

Tecnos[®] 101 has been specially formulated to give higher water reductions upto 20% without losing workability & improves pumpability of concrete.

Uses

- Specifically designed to suit the requirement of concrete road and pavement quality concrete.
- To produce concrete to supply for longer distances.
- To produce concrete mixes for smoother pumpability with good cohesion of mix.
- To make highly durable concrete by control on W/C.
- Compatible with all the minerals admixture like microsilica, flyash & GGBFS.

Benefits

- **Higher Cohesion-** Risk of segregation and bleeding can be minimized; thus aids pumping of concrete
- **Increased Strength-** Provides high early strength for the precast concrete if water reduction is taken advantage of.
- **Improved Workability-** Easier, quicker placing and compaction
- **Chloride-free-** It is a chloride free admixture suitable for all RCC structures & RMC's.

Standard Compliance

Tecnos[®] 101 product complies with IS:9103:1979 and BS:5075 Part - 3 and ASTM-C-494 Type G as a high range water reducing cum retarding admixture.

Properties

| | |
|-------------------------|---------------------------|
| Appearance | Dark Brown Colored Liquid |
| Solid Content | >50% |
| Specific Gravity | Approx.1.2 |
| Viscosity | Approx. 35 |
| pH | Approx. 7.5 |

Compatibility

Can be used with all types of cements except high alumina cement. Site trials should be carried out to optimize dosages & compatibility.

Workability

Can be used to produce high workable concrete mixes that requires no compaction. Some minor adjustments may be required to produce high workable mix without segregation.

Cohesion

Cohesion is improved due to dispersion of cement particles thus minimizing segregation and improving surface finish.

Compressive Strength

Early strength is increased upto 40 to 50% if water reduction is taken advantage of. Generally, there is improvement in strength upto 20% depending upon W/C ratio and other mix parameters.

Durability

Reduction in W/C ratio enables increase in density and impermeability thus enhancing durability of concrete.

Instructions for Use

Dosage

The optimum dosage is best determined by site trials with the concrete mix which enables the effects of workability, the strength gain or cement reduction to be measured. Site trials with Tecnos[®] 101 should always be compared with the control mix. As a guide, the rate of addition is generally in the range of 0.6-2.0% per 100 kg cement with addition of 80% water. Due to the variable site conditions or the concrete materials changes, prior trials are to be conducted. the optimum recommended dosage to be finalized to eliminate the issues like setting, segregation, bleeding etc. prior to onsite usage.

Over Dosing

An over dose of double the recommended amount of Tecnos[®] 101, will result in very high workability and some high level retardation of setting time will occur. However, the ultimate compressive strength will not be impaired.

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Dispensing

The measured quantity of Tecnos[®] 101 should be added along with the gauging water. For best results, add Tecnos[®] 101 in the last phase after pre wetting the mix with 80% of the total water required.

Mix Design

Thermax has an advisory service on Concrete Mix Design and can be contacted if assistance is required.

Health and Safety Instructions

Tecnos[®] 101 is non-toxic. Any splashes on the skin must be washed immediately with water. Splashes to the eyes must be washed immediately with water and medical advice should be sought.

Fire

Tecnos[®] 101 is non-flammable.

Storage

Tecnos[®] 101 has a minimum shelf life of 12 months when stored under normal temperatures. It should be protected from extreme temperatures and preferably stored in shade.

Packing

Tecnos[®] 101 is available in 20ltr and 260kg barrel.

Other Segments:

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives

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