TECNOS® 96 KV-S

High Range Water Reducing, Retarding Plasticising Admixture



TECNOS[®] 96 KV- S is based on the combination of Sulphonated Polymers and Ligno sulphonates is supplied as a brown liquid instantly dispersible in water.

TECNOS[®] 96 KV- S has been specially formulated to give highwater reductions upto 25% without loss of workability or to make high quality concrete of reduced permeability.

Uses

- To produce pumpable concrete with replacement of cement with high volume Fly ash, GGBS and slag.
- To produce high strength, higher grade concrete M30 and above by substantial reduction in water resulting in low permeability and high early strength.
- To produce high workability concrete requiring little or no vibration during placing.

Benefits

- **Improved Workability-** Easier, quicker placing and compaction.
- Increased Strength- Provides high early strength for the precast concrete if water reduction is taken advantage of.
- Improved Quality- Denser, close textured concrete with reduced porosity and hence more durable
- Higher Cohesion- Risk of segregation and bleeding can be minimised; thus aids pumping of concrete.
- Chloride-free- Safe in prestressed concrete and with the sulphate resisting cements and marine aggregates.

Standards Compliance

TECNOS $^{\tiny (8)}$ 96 KV- S complies with IS 9103: 1999, BS:5075 Part - 3 and ASTM-C-494-99 Type 'G' and 'F' as a high range water reducing admixture.

Properties

Specific Gravity	1.14-1.19 at 30°C
Viscosity	5-100 cps
рН	6-9
Solid Content	32-36%
Chloride Content	Nil as per IS 456 and BS
	5075
Air Entrainment	1% (additional)

Compatibility: Can be used with all types of cements except high alumina cement. TECNOS[®] 96 KV- S is compatible with other types of Apex admixtures when added separately to the mix. Site trials should be carried out to determine 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 up to 40 to 50% if water reduction is taken advantage of. Generally, there is improvement in strength up to 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® 96 KV- S should always be compared with the control mix. As a guide, the rate of addition is generally in the range of 0.6-1.5 ltr/100 kg cement.

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 on-site usage.

Over dosing

An over dose of double the recommended amount of TECNOS® 96 KV- S, 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[®] 96 KV- S should be added along with the gauging water. For best results, add TECNOS[®] 96 KV- S in the last phase after prewetting 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 & Safety instructions

TECNOS[®] 96 KV- S 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® 96 KV-S is non-flammable.

Storage

TECNOS[®] 96 KV- S 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® 96 KV-S is supplied in 260kg barrel.

Other Segments:

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

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