# **TECNOS<sup>®</sup> AE**

Air Entraining Admixture for Light Weight Concrete and Cementitious Mortars



TECNOS<sup>®</sup> AE is an air entraining admixture that develops microscopic bubbles in cement paste during mixing thus increasing its resistance to freeze-thaw and the workability.

TECNOS<sup>®</sup> AE has been specially formulated to for light weight concrete which instantly disperses in water producing uniformly spread air bubbles which in turn enhances the concrete's durability.

#### Uses

TECNOS<sup>®</sup> AE can be used for many applications, few of which are mentioned below:

- Light-weight Concrete
- Pre-stressed Concrete
- Concrete Roads, Bridge Decks, Airport Runways prone to frost damage
- Hydraulic structures like Dams & Reservoirs
- Poorly Graded Concrete
- Lean Concrete Mixes

#### **Benefits**

- Improved resistance to freeze-thaw cycle and scaling
- Improved workability and plasticity
- Better air entraining and retaining properties.
- Limits segregation and bleeding
- Resistant to extreme thermal variations
- Reduced permeability
- Increases stability and produces a cohesive mix

# **Standards Compliance**

TECNOS<sup>®</sup> AE complies ASTM-C-260.

#### **Properties**

Appearance	Pale Yellow Liquid
Specific Gravity	1.00-1.03 at 30ºC
рН	6-9
Solid Content	8.7-13.7%
Viscosity	0-100 cps

**Compatibility:** Can be used with all types of cements except high alumina cement. TECNOS<sup>®</sup> AE is compatible with other types of admixtures when added separately to the mix. Site trials should be carried out to determine optimize dosages & compatibility.

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

**Durability:** Introduction of air bubbles enables increase in 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<sup>®</sup> AE should always be compared with the control mix. There is no standard dosage for TECNOS<sup>®</sup> AE. As a guide, the rate of addition is generally around 0.1ltr /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 over the recommended amount of TECNOS<sup>®</sup> AE, will result in reduced strength due to increase in air entrainment. Due to the presence of air bubble, plasticizing effect will also increase however all the intensity of these changes will depend upon the concrete mix and the level of overdosing.

## **Mix Design**

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

## **Health & Safety Instructions**

TECNOS<sup>®</sup> AE 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<sup>®</sup> AE is non-flammable.

# **TECNOS<sup>®</sup> AE**

#### Storage

TECNOS<sup>®</sup> AE must be stored away from direct sunlight in sealed containers, preferably under cover and in shade. It should be protected from extreme temperatures and frost. It must be kept in a dry and cool place.

TECNOS<sup>®</sup> AE has a shelf life of 12 months when stored as advised.

In case the above mentioned storage conditions are not achieved, the product may face premature deterioration.

Please contact a Thermax representative for elaborate storage advice.

#### Packing

TECNOS<sup>®</sup> AE is supplied in 260kg barrel.



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