Concrete Admixtures - High Range Water Reducers

EUNICEM 180-K

Concrete superplasticizer

Product Description

EUNICEM 180-K is a liquid concrete superplasticizer that has been developed to allow concrete to attain particularly high performance in both the plastic and hardened states. It is particularly useful for imparting extreme workability to concrete mixes so that large or difficult pours can be made. Alternatively, EUNICEM 180-K can be utilized to effect large water reductions to achieve high early and subsequent strength.
EUNICEM 180-K is an extremely powerful deflocculating agent and performs by dispersing cement into its primary particles dramatically increasing flow characteristics of the cement paste. EUNICEM 180-K gives excellent slump retention, especially in hot weather.
EUNICEM 180-K conforms to the requirements of ASTM C494 Type A and F, BS 5075 Part 3.
Main application areas are:

- High quality concrete for durable structures.
- Reinforced and prestressed precast elements.
- Bridge decks and structural elements.
- Precast or in-situ structures.

Advantages

- High compressive strength concrete especially at early ages.
- Lowers w/c ratio.
- Good surface finish, providing highly aesthetic concrete appearance.
- Plastic concrete exhibits high cohesion, fluidity and flow ability.
- Savings in energy consumption when steam curing is employed.
- Classified as cold admixture and very good for using in hot weather concrete application.

Typical Properties

Appearance: Dark brown liquid
Specific Gravity: 1.20 ± 0.02 at 20°C
Air Entrainment: Nil
Chloride Content: Nil
Storage Life in Manufacturer's Drums: 12 months from date of manufacture.
Bulk Storage: 12 months from date of delivery.

Compatibility

With cements: EUNICEM 180-K is compatible with all Portland, Pozzolanic and blast furnace cements. It is also compatible with concrete containing fly ash and or silica fume.
With other admixtures: EUNICEM 180-K is compatible with all European Concrete Additives admixtures and particularly can be used in conjunction with air entraining agents. It is advisable to add all admixtures separately to a cementitious mix.

Method of Use

EUNICEM 180-K is supplied ready for use, and should be added to concrete mixes either during the mixing cycle or at the same time as the water, or alternatively it should be added in its supplied form to a normal concrete mix a few minutes before the pour is made. In the latter case a mixing cycle of at least two minutes should be provided to ensure complete dispersion.

Addition Rates Range

0.4% - 3.0% by weight of cement the optimum dosage is assessed after preliminary trials depending upon the actual mix constituents and specifications required.

Effects of Overdosing

Serious overdosing of EUNICEM 180-K will generally produce a concrete mix of even greater workability and set retardation but no increase in air entrainment. In cooler weather this retardation will be further increased.
If intentional or accidental increases above the recommended addition rates are employed, care must be taken to allow for the effect on the stripping time of formwork. In such cases, however, provided the concrete is properly cured the ultimate strength will generally be higher than for normal concrete.

Dispensing

It is preferable that liquid admixtures for concrete should be introduced into a mixer by means of

automatic dispensing equipment, details of which can be supplied upon request.

Health and Safety
For further information see the EUNICEM 180-K Material Safety Data Sheet.

Packaging
EUNICEM 180-K is supplied in 1000 liter containers. Alternatively, bulk deliveries can be arranged.

Storage
EUNICEM 180-K should preferably be stored protected from frost. If the product does become frozen it should be carefully mixed after thawing out to restore it to its normal state.

Technical Service
The Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

Contact Information
Al-Faiha for Engineering Products
techsupport@alfaihaengineering.com
www.alfaihaengineering.com

v01-02-2022