

EUNIFLOW 110

Polycarboxylate based concrete superplasticizer- high range water reducer



Product Description

EUNIFLOW 110 is a high range water-reducing admixture for high strength concrete. EUNIFLOW 110 superplasticizer is based on a synthetic carboxylate polymer and is manufactured under closely controlled conditions to give a consistent product. It contains no added chloride. EUNIFLOW 110 superplasticizer is formulated to comply with Standard Specification for Chemical Admixtures for Concrete, ASTM C 494, Type G material and BS 5075, Part III.

Advantages

- EUNIFLOW 110 superplasticizer is highly efficient, producing high slump concrete at low dosage with no loss in strength.
- EUNIFLOW 110 is added to concrete mix water for rapid batching.
- Plastic concrete exhibits high cohesion, fluidity and flow ability.
- Concrete with EUNIFLOW 110 will maintain slump properties in excess of two hours, even at high ambient temperatures.
- Addition of EUNIFLOW 110 to plain concrete will allow water reduction of up to 30%.
- Low water/cement ratio, which leads to excellent durability of concrete.
- Good surface finish, providing highly aesthetic concrete appearance.

Uses

EUNIFLOW 110 superplasticizer has been developed to allow concrete to attain particularly high performance in both the plastic and the hardened states. It is particularly useful for imparting exceptional workability characteristics to concrete mixes so that large or difficult pours can be made, whilst maintaining excellent slump retention properties especially in hot climatic conditions. It also allows flow able concrete to

be produced with very low water/cement ratios to achieve higher strengths.

Typical Properties

Appearance: Amber liquid
Specific Gravity: 1.09±0.02 at 20°C
Air Entrainment: 1.0% approx.
Chloride Content: Nil
Storage Life in Manufacturer's Drums: 12 months from date of manufacture.
Storage Life Bulk Storage: 12 months from date of delivery.

Dispersion

EUNIFLOW 110 superplasticizer is a superior dispersing admixture having a marked capacity to disperse the cement agglomerates normally found in a cement-water suspension. This capability exceeds that of normal high-range water reducing admixtures, resulting in lower dosages and better control.

Compatibility

With cements: EUNIFLOW 110 can be used with all types of Portland Cements, including Sulphate Resisting Cements.
With other admixtures: EUNIFLOW 110 is fully compatible with other European Concrete Additive products normally used in concrete without impeding their performance. EUNIFLOW 110 should not be used in combination with NSFC and MSFC superplasticizers. Most Type A water reducers or Type D water-reducing retarders are compatible with EUNIFLOW 110 superplasticizer as long as they are separately added to the concrete. Caution should be exercised when using EUNIFLOW 110 superplasticizer together with a retarder, as excessive retardation can occur if the admixture dosages are too high. Pre-testing of the concrete should be performed

to optimize dosages and addition times of these admixtures. The admixture should not contact each other before they enter the concrete.

Method of Use

EUNIFLOW 110 superplasticizer is supplied ready for use. When producing high workability concrete it can be added in its supplied form to the batching water, prior to the addition of the cementitious component. After the addition of cement, a further mixing cycle of at least 2 minutes is recommended to EUNIFLOW 110 to efficiently disperse the mix components.

Addition Rates Range

400ml – 3500ml per 100kg cement (0.4% - 3.5% [v/w] by weight of cement). Addition rates of EUNIFLOW 110 superplasticizer can vary with the type of application. As with most products of this type, the magnitude of the effect obtained with EUNIFLOW 110 is governed by the quantity of product used and the specific nature of the concrete and its constituent materials. It is necessary, therefore, to assess performance under site conditions using site materials to determine optimum dosage and effect on both plastic and hardened concrete properties, such as cohesiveness, workability retention, set characteristics, early rate of strength gain, ultimate compressive strength and shrinkage when these are of consequence. As a guide to these trials, an addition level of 0.8% - 1.2% EUNIFLOW 110 volume / weight of cement is recommended.

Effects of Overdosing

The effects of overdosing EUNIFLOW 110 are a function of the degree of overdose. When producing high workability concrete, overdosing will increase the level of workability and may induce the onset of segregation. Depending on the extent of the over-dose, an increase in the setting time will also occur, especially in low temperatures and/or when employing sulphate resisting cement or cement replacement materials.

Dispensing

It is preferable that liquid admixtures for concrete should be introduced into a mixer by means of automatic dispensing equipment. Such equipment is available from European Concrete Additives and details will be supplied on request.

Health and Safety

See EUNIFLOW 110 Material Safety Data Sheet, or consult our technical department.

Packaging

EUNIFLOW 110 is supplied in 1000 liter returnable containers. Alternatively, bulk deliveries can be arranged.

Storage

EUNIFLOW 110 superplasticizer contains no flammable ingredients. It will begin to freeze at approximately 0°C (32F), but will return to full strength after thawing and thorough agitation. In storage, and for proper dispensing, EUNIFLOW 110 superplasticizer should be maintained at temperatures above 0°C (32F).

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

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