

ECA Polyfiber F18

Polypropylene fibers 18mm



Product Description

ECA Polyfiber F18 is a high performance micro polypropylene fiber developed as a crack controlling additive for cementitious materials. It is available in two grades, designated by its fiber length, 12mm and 18mm for concrete, and 6mm for mortar. It is used to inhibit the formation of small cracks which can occur through plastic shrinkage, premature drying and early thermal changes, in order to provide utilization of the intrinsic properties of the hardened cementitious material. ECA Polyfiber F18 is based on selected raw materials and manufactured under controlled conditions to give a consistent product. ECA Polyfiber F18 fiber length is designed for cementitious mixes, which exhibit, a maximum aggregate size greater than 5mm (i.e. Concrete, etc.), and ECA Polyfiber F18 fiber length, for cementitious mixes exhibiting maximum aggregate sizes of less than 5mm (i.e. Mortar, etc.).

Advantages

- Inhibits intrinsic cracking in concrete
- Disperses uniformly throughout the mix
- Improves finishing characteristics
- Improves concrete durability
- Increases impact and abrasion resistance
- Rustproof
- Impervious to alkali attack
- Decreases construction time and labour
- Reduced risk of subsequent damage

Typical Properties

Appearance: Polypropylene fiber

Specific Gravity: 0.91 g/cm³

Alkali Content: Nil

Sulphate Content: Nil

Air Entrainment: Air content of concrete will not be significantly increased.

Chloride Content: Nil

Constituents: Polypropylene C₃H₆

Fiber Length: 18 mm

Fiber Thickness: 18 micron (2 Denier)

Specific Surface Area: 244 m²/kg

Storage Life in Manufacturer's Drums: 12 months from date of manufacture

Compatibility

With Other Admixtures and Cements: ECA Polyfiber F18 can be used with all types of cement and is compatible with other admixtures. Optimum dispersion results, first introduce the sand into the site drum mixer, followed by ECA Polyfiber F18. After mixing for 2-4 minutes, add the cement and the required quantity of water and continue mixing to obtain a homogeneous mix.

Specification Clause

Concrete shall be manufactured using crack controlling additive such as ECA Polyfiber F18 as supplied by European Concrete Additives or a similar approved product. The crack controlling additive shall be based on a polypropylene fiber exhibiting fiber surface area of 244m²/kg with an individual fiber thickness of 18 microns (2 denier). Fiber length shall be governed by the type of concrete being manufactured and the maximum aggregate size in use.

Addition Rates

The performance of ECA Polyfiber F18 is best assessed after preliminary trials in the laboratory, or on site using the actual mix constituents under consideration to determine the effect on concrete properties.

As a guide to trials, the following dosage levels of ECA Polyfiber are recommended.

Product	ECA Polyfiber F18
Fiber Length	18mm
Aggregate Size	>5 mm
Dosage	0.6-0.9 kg/m ³
Typical Areas of Application	Readymix Concrete, Screed, etc.

Uses

Specifically designed for crack control in cementitious materials covering areas such as ready-mix concrete, precast concrete, screeds, conventional shotcrete, rendering mortars, etc. Principle uses of fiber concrete include: concrete slabs, pavements, driveways, imprinted concrete, curbs, pipes, grouts, shotcrete, overlays, patch repair, microsilica concrete, thin section walling, water retaining structures, marine concrete, heavy industrial floors, etc.

Method of Use

ECA Polyfiber F18 is supplied ready for use, and in measured quantities for addition to the concrete mix either at the batching plant or on site.

Effects of Overdosing

Overdosing of ECA Polyfiber F18 will generally produce a reduction in workability and an increase in the cohesiveness of the mix.

Health and Safety

For further information consult the ECA Polyfiber F18 Material Safety Data Sheet, or consult European Concrete Additives.

Packaging

ECA Polyfiber F18 is available in 0.9 kg concrete dispersible bags.

ECA Polyfiber F18 is also available in 1 kg bags, and 125 gram bags. All bags are supplied over packed in cardboard box containers.

Storage

ECA Polyfiber F18 should be stored in dry conditions, similar to cement.

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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