

MICROFIBER[®] 12mm

32μ Polypropylene Fibers

Product Description

MICROFIBER[®] is a high-performance, monofilament, polypropylene fibre developed as a crack controlling additive for cementitious materials. 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 utilisation of the intrinsic properties of the hardened cementitious material.

MICROFIBER[®] is based on selected raw materials and manufactured under controlled conditions to give a consistent product. Specially 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 such fibre concrete include: concrete slabs, pavements, driveways, imprinted concrete, curbs, pipes, grouts, shotcrete and sprayed concrete, overlays, patch repair, microsilica concrete, thin section walling, sea defence and marine applications, water retaining structures, marine concrete, heavy industrial floors, etc.

The product is also suitable for use in tunneling and passive fire protection.

Advantages

- Inhibits intrinsic cracking in concrete, improved plastic shrinkage crack control
- Disperses uniformly throughout the mix
- Improves finishing characteristics
- Improves concrete durability
- Increases impact and abrasion resistance
- Rust and corrosion proof
- Improved explosive spalling and passive fire resistance
- Impervious to alkali attack
- Decreases construction time and labour
- Reduced risk of subsequent damage

Addition Rates

The performance of MICROFIBER[®] is best assessed after preliminary trial mixtures both in the laboratory and on site, using the actual mix constituents under consideration to determine the effect on concrete properties. As a guide to trials, a dosage level of 0.6–0.9 kg MICROFIBER[®] per m³ is recommended.

For advice and assistance with trials we recommend that you consult GCP Applied Technologies.

Typical Properties

Appearance	silvery white fibre, bundles
Air Entrainment	Nil
Chloride Content	Nil
Constituents	Polypropylene
Fibre Length	12 mm
Fibre Thicknes	32 micron
Specific Surface Area	142 m ² /kg

Method of Use

MICROFIBER[®] is supplied ready for use, in concrete dispersible bags, which contain measured quantities for addition to the concrete mix either at the batching plant or on site. Fibres should be added to the cementitious matrix and mixed for 5 minutes to ensure full dispersion. Under special circumstances it may be necessary to adjust the mode of addition and mixing cycle to suit specific applications.

The addition of MICROFIBER[®] may produce a slight reduction in workability while increasing the cohesiveness of the mix. Serious overdosing of MICROFIBER[®] will generally produce a reduction in workability and an increase in the cohesiveness of the mix.

Compatibility

With Cements:

MICROFIBER[®] can be used with all types of cement, including Limestone cement. It is also effective in concrete containing pulverised fuel ash or ground granulated blast furnace slag.

For use with special cements we recommend that you consult GCP.

With Other Admixtures:

MICROFIBER[®] should not be pre-mixed with other admixtures. The performance of the material may be affected by the presence of other chemicals and we would recommend that GCP be consulted in such circumstances.

Dispensing

MICROFIBER[®] is available in convenient concrete dispersible bags which are added, unopened, to the truck or central mixer.

Health and Safety

For further information we recommend that you consult GCP.

Packaging

MICROFIBER® is available in 0.9 kg concrete dispersible bags. All bags are supplied overpacked in cardboard boxes. Other pack sizes are available.

Storage

MICROFIBER® requires no special storage facilities under normal winter conditions.

Technical Service

The Technical Service department of GCP is available to assist you in the correct use of our products. Please contact:

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