

# MasterFiber 12mm

## Monofilament polypropylene fibers for cementitious systems

### MATERIAL DESCRIPTION

**MasterFiber 12mm** is a high-performance monofilament polypropylene fibre developed as a crack controlling additive for concrete and mortar. **MasterFiber 12mm** is supplied agglomerated in flakes bound by a water-soluble adhesive.

### TYPICAL APPLICATIONS

**MasterFiber 12mm** is used to inhibit the formation of small cracks which can occur through plastic shrinkage and settlement, premature drying and early thermal changes, in order to provide utilisation of the intrinsic properties of the hardened cementitious material.

Specifically designed for crack control in cementitious materials covering areas such as ready-mix concrete, precast concrete, conventional shotcrete, screeds rendering mortars, etc.

Principle uses of fibre concrete include concrete slabs, pavements, driveways, imprinted concrete, curbs, pipes, overlays patch repair, microsilica concrete, thin section walling, water retaining structures, marine concrete, heavy industrial floors etc.

### ADVANTAGES

- Can replace anti-crack wire mesh in factory and warehouse floors.
- Inhibits intrinsic cracking in concrete.
- Disperse 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.
- Improves fire resistance – reduces the incidence of explosive spalling during heating.

### PACKAGING

**MasterFiber 12mm** is available in bags of 0.6kg packs.

### TYPICAL PROPERTIES\*

Properties listed are for guidance and are not a guarantee of performance.

Specific gravity	0.91 g/cm <sup>3</sup>
Alkali content	Nil
Sulphate content	Nil
Air entrainment	Air content of concrete will not be significantly increased
Chloride content	Nil
Constituents	Polymerised polypropylene
Fibre diameter	18 micron
Fibre length	12mm
Surface area	230m <sup>2</sup> /kg min.
Youngs modulus	3500-3900 MPa
Tensile strength	Min 350 MPa
Melting point	160°C

### COMPATIBILITY

**MasterFiber 12mm** can be used with all types of cement and is compatible with other admixtures.

### ADDITION METHOD

**MasterFiber 12mm** is supplied ready for use, and in measure quantities for addition to the concrete mix whether at the batching plant or on site.

### SPECIFICATION

Concrete shall be manufactured using crack controlling additive such as **MasterFiber 12mm**, a polypropylene fibre with an individual fibre length of 12mm and thickness of 18 microns.

### ADDITION RATE

0.6kg/m<sup>3</sup>

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### STORAGE

Should be stored in dry conditions.

### EFFECTS OF OVERDOSING

Overdosing of **MasterFiber 12mm** will generally produce a reduction in workability and an increase in the cohesiveness of the mix.

### NOTE

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\* Properties listed are based on laboratory-controlled tests.

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