

# MasterFiber<sup>®</sup> 012

## Monofilament polypropylene fibres for cementitious systems

### DESCRIPTION

**MasterFiber 012** is a high performance monofilament polypropylene fibre developed as a crack controlling additive for concrete and mortar.

**MasterFiber 012** is supplied agglomerated in flakes bound by a water soluble adhesive.

### TYPICAL APPLICATIONS

**MasterFiber 012** 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 readymix 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 012** is available in bags of 0.6kg packed 30 to a box.

### TYPICAL PROPERTIES\*

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

### APPLICATION GUIDELINES

Standard dosage is 0.6kg/m<sup>3</sup> but other dosages can be used subject to engineering requirements and/or specification.

#### Effects of overdosing

Overdosing of **MasterFiber 012** will generally produce a reduction in workability, and an increase in the cohesiveness of the mix.

### MIXING

**MasterFiber 012** can be used with all types of cement and is compatible with other admixtures.

#### Addition method

**MasterFiber 012** 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 012**, a polypropylene fibre with an individual fibre length of 12mm and thickness of 18 microns.

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## STORAGE

Should be stored in dry conditions.

## QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

\* Properties listed are based on laboratory controlled tests.

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