

MasterFiber 343

Hybrid synthetic fibre for crack control in the early and late stages of cast concrete applications

Material Description

MasterFiber 343 is a blend of engineered synthetic macro and microfibrils to control early age and hardened shrinkage cracking. **MasterFiber 343** has been developed to provide post-crack flexural strength to enable the replacement and/or supplementation of existing concrete reinforcement products.

MasterFiber 343 conforms to the requirements of EN 14889.2 Class II.

Areas of Application

MasterFiber 343 applications include, but are not limited to:

- Industrial and warehouse hardstands
- Residential and commercial slabs-on-ground
- Concrete pavements and footpaths
- Architectural precast panels

Characteristics & Benefits

- Allows for full or partial substitution of steel mesh reinforcement
- Reduces plastic shrinkage and settlement cracking
- Improves concrete green strength
- Enhances ductility, durability, and post-crack flexural strength
- Decreased construction time and overall reduced labour and material costs
- Provides effective crack control
- Easy to dose either at the batch plant or on-site concrete mixer truck prior to application.

Properties

Macrofibre

Material	Virgin Polypropylene
Sectional shape	Rectangular
Longitudinal shape	Embossed
Length	47 mm
Equivalent diameter	0.95 mm
Aspect Ratio	49
Ultimate tensile strength	550 MPa
Young's Modulus	10 GPa
Density	910 kg/m ³
Melting point	Approx. 170°C
Acid/alkali resistance	High

Microfibre

Material	Virgin Polypropylene
Length	12 mm
Diameter	18 µm
Ultimate tensile strength	450 MPa
Density	910 kg/m ³
Acid/alkali resistance	High

Dosing & Batching

The typical dosage of **MasterFiber 343** is 4.6 kg/m³. **MasterFiber 343** is packaged in pre-portioned, ready-to-use, mulchable boxes that can be added directly to the concrete mixer. It is recommended to add fibre into a zone of sufficient shear to aid in fast fibre distribution through the mix.

After the addition of **MasterFiber 343** to the mix, it is recommended to mix for a minimum of 120 – 180 seconds.

The mechanical performance of **MasterFiber 343** is influenced by the mix design and cementitious materials used. Preliminary tests under practical conditions with regards to mixing and casting are advised for a proper assessment.

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Packaging

MasterFiber 343 comes in 4.6 kg mulchable boxes. 1 box contains 4.0 kg of macrofibre and 0.6 kg of microfibre.

The macrofibre component of **MasterFiber 343** is wrapped in water-soluble PVA to form bundles to aid in concrete mix dispersion.

Storage & Shelf Life

MasterFiber 343 should be stored undercover in a clean, dry area, protected from the weather. Use caution when stacking to avoid unstable conditions.

Note

Field service support, where provided in no way constitutes supervisory responsibility. For additional information please contact your local Master Builders Solutions representative. MB Solutions reserves the right to have the true cause of any technical challenge determined by accepted test method.

Disclaimer

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