

MasterFiber 154 SPA

Polypropylene macro fiber for use in concrete

APPLICATION

MasterFiber 154 SPA is used for structural purposes in concrete, mortar and grout.

FEATURES AND BENEFITS

- Improves the ductility of concrete.
- Transfers tensile stresses and bridges cracks in cementitious applications.
- Decreases crack propensity due to constrained deformations induced by drying shrinkage and temperature gradients and allows to partially or fully substitute related mesh reinforcement .
- Excellent resistance in alkaline and acidic environment.
- Provides rust free reinforcing solutions.
- Easy to dose with limited impact on workability.
- Safe to handle.
- No negative impact regarding machinery wear.

PERFORMANCE DATA AND PHYSICAL PROPERTIES*

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

Material	Polypropylene
Colour	Colourless
Density	0.91 kg/m ³
Fibre sectional shape	Irregular
Fibre longitudinal shape	Straight
Fibre surface	Embossed
Equivalent diameter	0.95mm
Fibre length	65mm
Aspect ratio	68
Tensile strength (acc. EN 14889-2)	440 MPa
Modulus (secant) of elasticity (acc. EN 14889-2)	4500 MPa
Young's modulus	>7000 MPa
Melting point	ca. 150 - 170°C
Ignition point	ca. 350°C
Transport	No dangerous goods according to transport regulations
Disposal	Combustible in appropriate facilities considering locally applicable guidelines
Marking according to EC-Guidelines	No obligation for indication

RECOMMENDED DOSAGE

2.5 –8.0 kg/m³ Higher dosages are generally possible but substantial redesign of a given concrete mix design is required.

DOSING AND MIXING

Appropriate fibre dispersion can be achieved either by adding the fibres to the aggregate belt or by adding the fibres via a sufficient dosing equipment directly into the mixer or ready-mix truck to the already mixed concrete. While processing attention shall be paid that fibres do not separate or agglomerate (e.g. during discharge to mixer), regarding the latter one special care should be taken that fibres are added to zones with sufficient shear. Our recommendation is to continue mixing for minimum 90-120 seconds after the addition of fibres. Very high fibre dosages may require significantly higher mixing time in order to achieve sufficient fibre dispersion.

ADVICE

The addition of fibres to a concrete might decrease its consistency. This should not be compensated by adding water to the mix. The recommendation is to optimize the mix either by adapting the mix design or by adding a superplasticizer. The mechanical performance of fibres is influenced by the concrete mix design and cementitious materials used. In order to evaluate properly preliminary tests under practical conditions with regard to mixing, placing and curing are advisable. For any further advice, please contact your local technical sales contact.

COMBINATION

Because of its inert nature, this fibre is combinable with all products of the Master Builders Solutions product range. As generally recommended also for combination of this fiber with MasterAir products initial and identity testing should be performed.

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STORAGE AND DISPOSAL

The shelf life is 48 months, if stored in original packaging between +5 °C and +30 °C in a closed room protected from humidity (water soluble bundles) and direct sun light. In addition, fibres should be protected against fire.

The disposal of the product and its packaging is the responsibility of the end user. Please take into account requirements according to local legislation.

HEALTH AND SAFETY

If treated according to the purpose of use no harm or injury to be expected. Common rules of occupational health and safety should be applied while handling this fiber.

PACKAGING

5,0 kg water soluble bundles in carton boxes For other packaging options please contact us.

NOTE

Technical support, where provided, does not constitute supervisory responsibility. For additional information contact your local MB Construction Chemicals Solutions South Africa (Pty) Ltd representative. MB Construction Chemicals Solutions South Africa (Pty) Ltd shall not be liable for technical advice provided.

MB Construction Chemicals Solutions South Africa (Pty) Ltd reserves the right to have the true cause of any difficulty determined by accepted test methods. Undertaking such tests is not, and shall not be deemed to be, an admission of liability or an assumption of any risk, loss, damage or liability.

QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions South Africa (Pty) Ltd are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, environmental and occupational health and safety standards.

* Properties listed are based on laboratory-controlled tests.

DISCLAIMER

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