

MasterFiber I 56 SPA

Macro synthetic fibres for concrete and fibre-reinforced shotcrete in water soluble pucks.

Description and fields of application

MasterFiber I 56 SPA is a macro synthetic fibres obtained by extrusion of polypropylene-based synthetic polymers, with a "wavy" profile, which is optimised to increase adhesion to the concrete mix matrix. It is used to reinforce concrete, increasing its ductility and strength, and is an excellent alternative to metal fibre reinforcement solutions.

MasterFiber I 56 SPA macro synthetic fibres are particularly suitable for the preparation of conglomerates intended for alkaline environments – which require high chemical resistance – in aggressive or potentially aggressive environments, and in all cement-based systems where corrosion may potentially occur. MasterFiber I 56 SPA macro synthetic fibres disperse well in cement mixtures, which is essential to make homogeneous concrete, and also have an important anti-spalling function in case of fire (see CNR-DT 204/06).

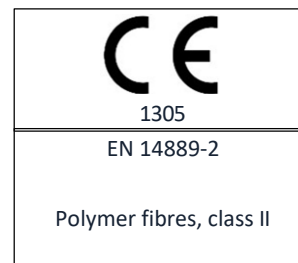
The fields of application for MasterFiber I 56 SPA macro synthetic fibres are:

- concrete reinforcement;
- shotcrete in general;
- pre-coating of tunnels;
- consolidation of excavation faces;
- slope reinforcement;
- wall consolidation;
- non-structural, prefabricated concrete products.



MasterFiber I 56 SPA polypropylene macro fibres

In compliance with the European Regulations (EU No. 305/2011 and EU No. 574/2014), the product is CE-marked in accordance with UNI EN 14889-2 and the relevant DoP (Declaration of Performance).



Directions for use

MasterFiber I 56 SPA macro synthetic fibres must be added in the truck mixer after the mixing water and additive, preferably while loading the aggregate, or in the pre-mixer after all the components have been added. After loading, it should be stirred for at least 5 minutes to ensure the fibres are incorporated properly into the cement mix.

Compatibility

MasterFiber I 56 SPA macro synthetic fibres can be used in combination with all Master Builders Solutions additives. For an optimised anti-spalling function, we recommend combining them with the MasterFiber 012 and MasterFiber 018 polypropylene micro synthetic fibres.

Dosage

The dosage of MasterFiber I 56 SPA macro synthetic fibres can range from 2.5 to 4.0 kg per m³ of concrete, depending on the specific performance features required. If MasterFiber I 56 SPA macro synthetic fibres are to be used as a substitute for the primary reinforcement, always ensure suitable planning first. They can replace the secondary reinforcement.

For correct use, please contact a Master Builders Solutions technician.



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General characteristics	
Fibre class	II
Water absorption	null
Resistance to acids/alkalis	high
Melting point (°C)	155-165
Decomposition temperature (°C)	280
Technical data according to EN 14889-2	Performance
Polymer type	Polyolefin
Colour	Colourless
Density [kg/m ³]	910
Shape (longitudinal)	Wavy
Form (section)	Irregular
Diameter [mm]	0.91
Length [mm]	55
Length/diameter ratio	60
Tensile strength [MPa]	560
Modulus of elasticity [MPa]	3900
Effect on concrete consistency: fibre dosage in kg/m ³ , Vebe time in s with fibres	5.0 7.0
Effect of strength on concrete Fibre dosage in kg/m ³ meets requirements	5.0

Packaging and storage

MasterFiber I 56 SPA macro synthetic fibres are 55 mm long, packed in pucks weighing approximately 95 g, in a water-soluble film, in 6 kg plastic bags. Please store in a dry place. They have no expiry date.

Safety instructions

For guidance on the correct and safe use, transport, storage and disposal of the product, please refer to the latest Safety Data Sheet (SDS)

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Additional services

For additional technical information, brochures, references, technical reports and technical support, please visit www.master-builders-solutions.com/it-it or write to infomac@masterbuilders.com.

Scan the QR code to go to the product page and download the latest version of this data sheet and any additional documentation.



Disclaimer

Since 16/12/1992, Master Builders Solutions Italia Spa has been operating under a Certified Quality System in compliance with UNI EN ISO 9001. Furthermore, the Environmental Management System is certified according to UNI EN ISO 14001 and the Safety Management System is certified according to UNI ISO 45001.

For more information, please contact your local Master Builders Solutions Italia Spa technician.

Any technical advice provided verbally or in writing on how to use our products is based on the current state of our scientific and practical knowledge and does not imply our acceptance of any guarantee and/or liability on the end result of work done using our products. As such, any advice does not relieve the customer from the exclusive duty and liability of verifying whether our products are suitable for the intended use and purpose.

This edition voids and replaces all previous editions.

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