

MasterFiber 320

High performance “twisted” synthetic macro fibers for concrete floors, in water-macerable packaging.

Material description

MasterFiber 320 is a high performance polyolefin synthetic macro fiber with a twisted shape with structural functions based on a special blend of polyolefin polymers.

Field of applications

The use of MasterFiber 320 macro fibers are particularly indicated in the packaging of conglomerates intended for alkaline environments, where high chemical resistance is required, in aggressive or potentially aggressive environments, in all cement-based systems where a corrosion phenomenon could potentially be triggered.

The macro fibers MasterFiber 320 have a good dispersibility within the cement mixtures, an essential element for the realization of homogeneous concretes.

In accordance with EN 14889-2, MasterFiber 320 is recommended for structural uses in concrete, mortar and grout.

The fields of use of the MasterFiber 320 macro fibers are:

- industrial flooring,
- reinforcement of shotcrete,
- precast concrete products such as panels, electrical substations, new jersey, wells, water collection tanks, etc.

Benefits

- They improve the ductility of concrete.
- Excellent resistance to alkalis and acids.
- Recommended for making concrete in highly aggressive environments (marine / chemical industry etc.) where the use of metal fibers is not recommended for problems related to corrosion.
- Easy to dose and with low impact on workability.

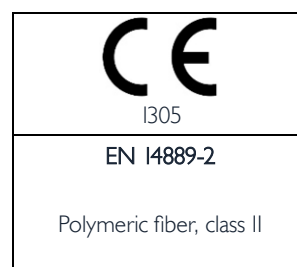
The use of MasterFiber 320 macro polymeric fibers can take place in complete or partial replacement of the primary reinforcement. In this case, please note that FRC, structural fiber-reinforced concrete must comply with the provisions of the DM. 17/01/2018 (Technical Standards for Construction) and Circular no. 7/2019.

MasterFiber 320 can also be used in place of the distribution armature (electro-welded mesh) to counteract thermo-hygrometric movements.



MasterFiber 320 “twisted” polyolefin macro fibers

In compliance with the European Regulation (EU No 305/2011 and EU No. 574/2014) the product is provided with the CE marking according to UNI EN 14889-2 and the relative DoP (Declaration of Performance).



Dosage

The dosage of the MasterFiber 320 macro fibers can vary from 1 to 4 kg per m³ of concrete, depending on the specific performance characteristics required.

For correct use, please consult the technical staff of Master Builders Solutions Italia Spa.

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Packaging and storage

MasterFiber 320 macro fibers are available in 54 mm lengths, packed in 1 kg packs of water-macerable paper, in 10 kg

cardboard boxes. Store in a dry place, they have no expiration date.

Technical Information	
Fiber class	II
Water adsorption	null
Alcaly Resistance	high
Melting point (° C)	155-165
Decomposition temperature (°C)	approx. 350
Essential characteristic in accordance to EN 14889-2	Performance
Type of polymer	Poly-olefin compound
Colour	Grey
Density [kg/m ³]	910
Longitudinal shape	Twisted
diameter [mm]	0.75
Length [mm]	54
Length / Diametre Ratio	72
Toughnesses index (N/mm ²)	500
Elastic modulus (N/mm ²)	5.500
Effect on the strength of concrete	
[Fiber dosage in kg/m ³ for requirements	5
res. strength in MPa at CMOD = 0.5 mm	2.1
res. strength in MPa at CMOD = 3.5 mm	2.3

Directions for use

The MasterFiber 320 polyolefin macro fibers must be added to the truck mixer after the addition of the mixing water and the additive, preferably during the loading phase of the aggregates, or in the pre-mixer after the addition of all the components.

After loading, it is recommended to mix for at least 5 minutes in order to ensure a good homogenization of the fibers in the cement mixture.

Compatibility

MasterFiber 320 macro fibers can be used in combination with all Master Builders Solutions Italia Spa additives and in particular with MasterGlenium PAV, for the construction of industrial flooring, MasterGlenium SKY, MasterEase for ready-mixed concrete.



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Safety information

For information on the correct and safe use, transport, storage and disposal of the product, consult the most recent Safety Data Sheet.

Other services

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

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



Disclaimer

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

For further information, please consult the local Technician of Master Builders Solutions. The technical advice on how to use our products, either written or verbally given, are based on the current state of our scientific and practical expertise, and does not imply the assumption of any guarantee and/or responsibility for the final results of works executed using our products.

Therefore, the customer is not exempted from the exclusive task and responsibility of verifying the suitability of our products for the intended use and purposes.

This version supersedes all the previous ones.

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