

MasterFiber 050

Basalt fibers for the prevention of plastic shrinkage cracking in cementitious mixes.

Material description

MasterFiber 050 are natural micro fibers obtained by basaltic rock melting, fiber spinning and cutting to the desired length. MasterFiber 050 is environmentally safe, non-toxic, has a high heat stability, insulating properties and has an elastic structure. They are also extremely durable and durable.

The natural micro fibers in basalt MasterFiber 050 are agglomerated in small flakes, characterized by a high specific surface, expressly studied the reinforcement of concrete and the prevention of plastic shrinkage.

The use of MasterFiber 050 is therefore compatible with the aggregates present in the concrete mixtures and its specific weight, similar to that of the concrete conglomerate, prevents it from surfacing on the surface.

The natural micro-fibers in basalt MasterFiber 050 have excellent dispersion within the cement mixtures, homogeneously distributed, an essential element for the production of quality fiber-reinforced concretes.

Fields of application

MasterFiber 050 can be used for:

- industrial floors;
- architectural and pervious concrete;
- prefabricated panels;
- exposed aggregates concrete;
- self-leveling screeds.



Basalt micro-fibers MasterFiber 050

Properties: prevention of cracks and improvement of concrete durability

The role of the natural micro-fibers of basalt MasterFiber 050 is to limit plastic shrinkage cracking in cementitious materials during the first few hours of curing. The natural micro-fibers in basalt MasterFiber 050 are particularly suitable for use in cement conglomerates because of their high affinity with the matrix itself, giving the concrete greater resistance to tangential stresses.

Furthermore, the natural micro-fibers in basalt MasterFiber 050 have a perfect dispersion in cementitious mixtures and, thanks to their high density, completely avoid the superficial floating problem and, at the fresh state:

- considerably limit the shrinkage of mortars and concretes during the plastic phase.
 - limit the bleeding and segregation phenomena.
 - facilitate surface finishing.
 - they are practically invisible on the surface.
 - do not require the addition of water or additional additive.
- in the hardened state:
- contribute to obtain a more durable cement conglomerate as it is free of cracks and therefore more resistant to attack by aggressive agents.
 - improvement of the mechanical characteristics of the concrete.
 - increase the abrasion resistance of the surface.

Dosage

The advised dosage for MasterFiber 050 is from 0.5 to 3.0 Kg per m³ of concrete.

For further advice or before using, contact Master Builders Solutions Italia Spa Technical Services Department.

Packaging and storage

MasterFiber 050 are packaged in 1 kg or 5 kg plastic bags.

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| Technical Information | |
|------------------------------|-------|
| Density (g/cm ³) | 2,65 |
| Melting point (°C) | 1.350 |
| Diametre (mm) | 0.013 |
| Length (mm) | 16 |
| Length / Diametre Ratio | 1.230 |
| Color | brown |
| Tensile strength (MPa) | 2.800 |
| Elastic Modulo (GPa) | 84 |
| Elongation at break (%) | 2.8 |
| Water adsorbtion | null |

Directions for use

MasterFiber 050 are added either to the dry components and mixed or added to the already mixed paste in the mixer just before starting the pouring operation. In both cases, a few minutes' mixing is enough to obtain a good dispersion of the fibers.

MasterFiber 050 must never be added to mix water alone before introducing the other components.

Compatibility

MasterFiber 050 are compatible with all the other admixtures manufactured by Master Builders Solutions Italia Spa.

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.



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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.

Master Builders Solutions Italia Spa

Via Vicinale delle Corti, 21 – 31100 Treviso – Italia

T +39 0422 429200 F +39 0422 421802

www.master-builders-solutions.com/it-it

e-mail: infomac@masterbuilders.com