MasterFiber 050

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

DESCRIPTION AND WHERE TO USE
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.

The applications are:
- Industrial floors.
- Architectural and pervious concrete.
- Prefabricated pannels.
- 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.

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.
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**TABLE FOR PROPERTIES AND CHARACTERISTICS OF THE NATURAL MICRO FIBERS IN BASALT MASTERFIBER 050**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density (g/cm³)</td>
<td>2.65</td>
</tr>
<tr>
<td>Melting point (°C)</td>
<td>1,350</td>
</tr>
<tr>
<td>Diameter (mm)</td>
<td>0,013</td>
</tr>
<tr>
<td>Length (mm)</td>
<td>16</td>
</tr>
<tr>
<td>Length / Diameter Ratio</td>
<td>1.230</td>
</tr>
<tr>
<td>Color</td>
<td>brown</td>
</tr>
<tr>
<td>Tensile strength (MPa)</td>
<td>2.800</td>
</tr>
<tr>
<td>Elastic Modulo (GPa)</td>
<td>84</td>
</tr>
<tr>
<td>Elongation at break (%)</td>
<td>2.8</td>
</tr>
<tr>
<td>Water adsorption null</td>
<td></td>
</tr>
</tbody>
</table>

**COMPATIBILITY**

MasterFiber 050 are compatible with all the other admixtures manufactured by BASF Construction Chemicals Italia Spa.

**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 BASF Construction Chemicals Italia Spa Technical Services Department.

**PACKAGING AND STORAGE**

MasterFiber 050 are packaged in 1 kg or 4 kg plastic bags.

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For further information, please consult your local BASF Construction Chemicals Italia Spa representative.

The technical advice on how to use our products, either written or verbally given, are based on the present state of our best scientific and practical knowledge, and no guarantee and/or implicit or explicit responsibility are assumed on final results of works executed by the use of our products.

The owner, his representative, or the contractor is responsible for checking the suitability of our products as to the intended use and aims.

Supersedes all prior issues on this product.

March 2019