**MasterEmaco® S 850FR**

Premixed cement-based shotcrete mortar with steel fibres

**DESCRIPTION**

**MasterEmaco S 850FR** is a ready-to-use, multi-component, cement based shotcrete mix incorporating steel fibres for increased toughness. It is specially designed for civil and mining applications using either the wet or dry shotcreting process.

**RECOMMENDED USES**

- Repairs to the underside of bridge decks, bridge piers and beams, tunnel linings, mine roadways, drains, sea walls, and culverts
- Embankment stabilisation

**FEATURES AND BENEFITS**

- **Factory quality control** - uniform results with every application.
- **Easy to use** - requires only the addition of potable water for mixing or spraying.
- **Economical** - reduces handling and clean-up costs.
- **Pumpable** - easy to transport using wet shotcrete pump.
- **Good working time** - over one hour at 21°C, (wet system)
- **Controlled shrinkage** - reduces chance of shrinkage cracking.
- **Steel fibres reinforced** - provides additional flexural strength and energy absorption.

**TYPICAL PERFORMANCE DATA**

<table>
<thead>
<tr>
<th>Age</th>
<th>Compressive Strength (MPa)</th>
<th>Flexural Strength (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 day</td>
<td>10.0</td>
<td>3.0</td>
</tr>
<tr>
<td>7 days</td>
<td>35.0</td>
<td>5.0</td>
</tr>
<tr>
<td>28 days</td>
<td>50.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>

All performance data is determined by testing of actual, in-place shotcreted specimens such as cores and beams taken from test panels.

Reasonable variations from the data shown can be expected, depending on the care taken in evaluating test specimens, and jobsite conditions such as the quality of substrate preparation, level of expertise of the nozzle man, curing procedures and weather.

**APPLICATION DIRECTIONS**

Prepare the surface to be shotcreted by removing all unsound concrete, dirt, dust and debris. When attempting structural repairs to existing concrete members, saturate the properly prepared concrete surface for a minimum of 7 hours prior to shotcreting.

**Equipment**

Please contact your BASF Construction Chemicals technical representative in your area for more information.

**Dry mix shotcrete**

Empty the **MasterEmaco S 850FR** into the dry mix shotcrete machine and add enough water at the nozzle to achieve a cohesive mix that adheres to the substrate. **MasterEmaco S 850FR** can be shotcreted in depths ranging from 10-100mm in one pass.

**Wet mix shotcrete**

Mix **MasterEmaco S 850FR** with approximately 1.8-2.5 litres of water per 20kg bag.

For overhead application please refer to your BASF Technical Sales Representative.

**CURING**

Proper curing is extremely important. Wet curing is recommended with the dry process for the first 3-5 days, after that time continue curing by the use of a quality curing compound from the BASF **MasterKure** range.

**ESTIMATING DATA**

One 20kg bag of **MasterEmaco S 850FR** mixed with water yields approximately 10.2 litres (0.0102m³).

Allowance must be made for rebound and cut off for finishing which will reduce the coverage accordingly.

Without allowing for cut-off, an allowance of 5-10% can be made for rebound. This is for an experienced nozzleman and ideal conditions. For overhead spraying the rebound allowance should be increased to 10-50% depending on the admixtures used, and nozzleman’s experience.
MasterEmaco® S 850FR

Packaging

MasterEmaco S 850FR is available in 20kg bags.

Shelf Life

MasterEmaco S 850FR has a shelf life of 12 months. Store out of direct sunlight, clear of the ground on pallets protected from rainfall.

Precautions

For the full health and safety hazard information, first-aid measures and how to safely handle and use this product, please make sure that you obtain a copy of the BASF Safety Data Sheet (SDS) from our office or our website.

Statement of Responsibility

The technical information and application advice given in this BASF publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product’s suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

Note

Field service where provided does not constitute supervisory responsibility. Suggestions made by BASF either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not BASF, are responsible for carrying out procedures appropriate to a specific application.