SikaGrout® FM

HIGH PERFORMANCE, NON-SHRINK CEMENTITIOUS GROUT

DESCRIPTION
A ready mixed, low heat cementitious grout incorporating silica fume which has excellent flowability and volumetric expansion characteristic to compensate the plastic shrinkage normally associated with cementitious grout.

USES
For grouting over a wide range of applications:
• Anchor bolts
• Machine bedding/base plates
• Supporting bridge bearing pads
• Precast concrete sections
• Dry pack applications
• Cavities, gaps and recesses

CHARACTERISTICS / ADVANTAGES
• Easy to use: just add water
• Low heat development
• Good flow characteristic
• Adjustable consistency
• Shrinkage compensated
• High final strength
• Suitable for use in marine structure
• Non-Corrosive
• Non-Toxic

PRODUCT INFORMATION

<table>
<thead>
<tr>
<th>Packaging</th>
<th>25 kg bag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance / Colour</td>
<td>Powder / Grey</td>
</tr>
<tr>
<td>Shelf life</td>
<td>9 months from the date of production if stored in undamaged and unopened original sealed bags</td>
</tr>
<tr>
<td>Storage conditions</td>
<td>Store in dry condition between +10 °C - +30 °C</td>
</tr>
<tr>
<td>Density</td>
<td>~2.21 kg/L</td>
</tr>
</tbody>
</table>

TECHNICAL INFORMATION

| Compressive Strength | 1 day   | ~15.0 N/mm²  |
|                      | 3 days  | ~30.0 N/mm²  |
|                      | 7 days  | ~40.0 N/mm²  |
|                      | 28 days | ~55.0 N/mm²  |

| Tensile Strength in Flexure | 28 days | ~5.0 N/mm² |

(ASTM C-109)

(ASTM C-348)
Tensile Adhesion Strength

<table>
<thead>
<tr>
<th>Time</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 days</td>
<td>~1.5 N/mm² Concrete failure, over roughened concrete surface</td>
</tr>
<tr>
<td>28 days</td>
<td>~2.5 N/mm² Over mechanically roughened old grout surface</td>
</tr>
</tbody>
</table>

Expansion

<table>
<thead>
<tr>
<th>Time</th>
<th>Value</th>
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<tbody>
<tr>
<td>1 - 3 h</td>
<td>0.30 - 1.20 % (ASTM C-940)</td>
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</tbody>
</table>

APPLICATION INFORMATION

Mixing Ratio
4.0 L per 25 kg bag (water per powder = 16 % by weight)

Consumption
~1 905 kg/m³ of mortar

Yield
13.15 L per 25 kg bag

Layer Thickness
Recommended thickness is 20 - 100 mm

Flowability
Flow cone (mm) 240 - 280 mm (ASTM C230/230M)

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

SURFACE PREPARATION
- Remove dirt, oil, grease, loose material and other bond-inhibiting materials.
- Anchor bolts to be grouted must be degreased with suitable solvent.
- Concrete must be sound and roughened to promote mechanical adhesion.
- Prior to pouring, surface must be wetted to saturated surface dry.

FORMING
For pourable grout, construct forms to retain grout without leakage. Forms should be lined or coated with bond-breaker for easy removal. Forms should be sufficiently high to accommodate head of grout. Where grout tight form is difficult to achieve, use SikaSet Accelerator as water plug (refer to PDS SikaSet Accelerator).

MIXING
Put measured quantity of water (depend on the required consistency) into a mixing vessel. Add slowly the total contents of SikaGrout® FM while mixing. Mix continuously for 3 minutes to achieve an even consistency. Use a mechanically low speed drill (400–600 rpm) with mixing paddle or appropriately sized mortar mixer.

APPLICATION
Within 25 minutes after mixing, place grout into forms from one side to avoid air entrapment. Do not vibrate. Use a suitable head box of 150–200 mm and maintain the grout head at all times to ensure a continuous flow. Gentle tapping or pulling loops of wire from one side may assist the flow of the mortar under difficult working conditions.

CURING TREATMENT
Wet cure for a minimum 3 days with wet hessian, plastic sheet or apply a curing compound (Antisol)

CLEANING OF EQUIPMENT
Clean all tools and application equipment with water immediately after use. Hardener and/or cured material can only be remove mechanically.

IMPORTANT CONSIDERATIONS
- Minimum application thickness : 10 mm
- Recommended thickness of SikaGrout® FM in one pour is 20 mm to 100 mm.
- If the thickness exceeds 100 mm, special procedure must be taken to anticipate temperature rise. Iced water, add coarse aggregate to the mix (max. 40% by powder weight), or both of them may be used to eliminate temperature rise.
- Variations in cement could cause shade differences in colour of the mortar.
BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika’s current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika’s recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product’s suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.