

# PRODUCT DATA SHEET

## SikaGrout<sup>®</sup> 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

<b>Packaging</b>	25 kg bag
<b>Appearance / Colour</b>	Powder / Grey
<b>Shelf Life</b>	9 months from the date of production if stored in undamage and un-opened original sealed bags
<b>Storage Conditions</b>	Store in dry condition between 10 °C - 30 °C
<b>Density</b>	2.21 kg/L

#### TECHNICAL INFORMATION

<b>Compressive Strength</b>	1 day	~15.0 N/mm <sup>2</sup>	(ASTM C-109)
	3 days	~30.0 N/mm <sup>2</sup>	
	7 days	~40.0 N/mm <sup>2</sup>	
	28 days	~55.0 N/mm <sup>2</sup>	
<b>Tensile Strength in Flexure</b>	28 days	~5.0 N/mm <sup>2</sup>	(ASTM C-348)
<b>Expansion</b>	at 27 °C	0.30 - 1.20 %	(ASTM C-940)

<b>Tensile Adhesion Strength</b>	28 days	~1.5 N/mm <sup>2</sup> Concrete failure, over roughened concrete surface
	28 days	~2.5 N/mm <sup>2</sup> Over mechanically roughened old grout surface

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	4.0 L per 25 kg bag (water per powder = 16 % by weight)	
<b>Consumption</b>	~1 905 kg/m <sup>3</sup> of mortar	
<b>Yield</b>	13.15 L per 25 kg bag	
<b>Layer Thickness</b>	Recommended thickness is 20 - 100 mm	
<b>Flowability</b>	Flowable	(Mode J cone : 4 - 12 sec)
<b>Product Temperature</b>	<30 °C, max.	
<b>Ambient Air Temperature</b>	10 °C - 35 °C	
<b>Substrate Temperature</b>	10 °C - 35 °C	
<b>Pot Life</b>	25 min	
<b>Setting Time</b>	4 - 8 hours	

## 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 appropriate 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 helical type 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 TOOLS

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

## LIMITATIONS

- 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 Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Please 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.

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