

# PRODUCT DATA SHEET

## SikaGrout<sup>®</sup>-280 HS

HIGH PRECISION AND MICRO STEEL FIBRE REINFORCED, NON-SHRINK CEMENTITIOUS GROUT

### DESCRIPTION

A non-shrink, cementitious premixed grout with micro steel fibre to provide excellent impact and vibration resistance.

### USES

For grouting over a wide range of applications:

- Machine bedding/base plates
- Turbine - generator set base plates
- Centrifugal compressors
- Crane rails
- Crusher – Ball Mills
- Structure that has high vibration

### CHARACTERISTICS / ADVANTAGES

- Easy to use, just add water and mix the micro steel fibre
- Good flow characteristic.
- Adjustable consistency.
- Rapid strength development.
- Highly improved Impact and vibration resistant compared to conventional cementitious grout
- Shrinkage compensated.
- High final strength.
- Non-Toxic.

### PRODUCT INFORMATION

<b>Packaging</b>	25 kg bag (consist of grout and separate micro steel fibre pouch inside the bag)
<b>Shelf life</b>	6 months from date of production if stored in undamaged and unopened original sealed bags
<b>Storage conditions</b>	Stored in dry condition between +10 °C - +30 °C
<b>Appearance and colour</b>	Powder / Grey
<b>Density</b>	~2.28 kg/L

### TECHNICAL INFORMATION

<b>Compressive strength</b>	1 day	~40.0 N/mm <sup>2</sup>	(ASTM C-349)
	3 days	~60.0 N/mm <sup>2</sup>	
	7 days	~73.0 N/mm <sup>2</sup>	
	28 days	~88.0 N/mm <sup>2</sup>	
<b>Tensile strength in flexure</b>	1 day	~2.0 N/mm <sup>2</sup>	(ASTM C-348)
	3 days	~4.0 N/mm <sup>2</sup>	
	7 days	~9.0 N/mm <sup>2</sup>	
	28 days	~18.0 N/mm <sup>2</sup>	

<b>Tensile adhesion strength</b>	28 Days	~1.5 N/mm <sup>2</sup> (Concrete failure, over mechanically roughened concrete surface)
	28 Days	~2.5 N/mm <sup>2</sup> (Over mechanically roughened grout surface)
<b>Expansion</b>	1 - 3 h (at +27 °C)	0.3 - 0.8 % (ASTM C-940)

## APPLICATION INFORMATION

<b>Mixing ratio</b>	4.0 L per 25 kg bag (water per powder = 16 % by weight)	
<b>Consumption</b>	~1 970 kg/m <sup>3</sup> of mortar.	
<b>Yield</b>	12.70 L per 25 kg bag	
<b>Layer thickness</b>	Recommended thickness is 20 - 150 mm	
<b>Flowability</b>	Flow cone (mm)	≥ 200 mm* (ASTM C230/230M) *measured after mixed
<b>Material 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>	Initial Setting Time (at +27 °C)	~5 - 8 h
	Final Setting Time (at +27°C)	~6 - 9 h

## 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.

## IMPORTANT CONSIDERATIONS

- Minimum applications thickness : 20 mm.
- Recommended thickness of SikaGrout®-280 HS in one pour is 20 mm to 150 mm. If the application thickness exceeds 150 mm, special procedure must be taken to anticipate temperature rise.
- Variations in cement could cause shade differences in colour of the mortar.
- Use puncture resistant gloves when handling micro steel fibre.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## 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®-280 HS while mixing. Mix continuously for 2 minutes to achieve even consistency. Use a mechanically low speed drill (400 - 600 rpm) with mixing paddle or appropriately sized mortar mixer. Pour micro steel fibre reinforced into mixed material SikaGrout®-280 HS, then mix mechanically for 1 minute to get homogeneous. Total mixing time is 3 minutes. Before pouring, leave the mixture to stand for 2-3 minutes, in order to allow entrapped air to escape.

## APPLICATION

Within 25 minutes after mixing, place grout into forms 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 of 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. Hardened and / or cured material can only be removed mechanically.

## 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 exact product data and uses.

## 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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