

## PRODUCT DATA SHEET

# Sikacrete® Gunitite-105 FP

### One Component Gunitite Applied Mortars

#### DESCRIPTION

Sikacrete® Gunitite-105 FP is cement based one component gunitite mortars that cure to produce water resistant, high strength mortars with excellent adhesion and abrasion resistance. Sikacrete® Gunitite-105 FP is designed for mechanical application by dry shot guniting.

Sikacrete® Gunitite-105 FP is non-polymer modified.

#### USES

For all mechanically applied concrete repair work using dry process guniting :

- Large repairs to reinforced concrete where there is corrosion of the reinforcement eg. bridges, viaducts, reservoirs, concrete walls, slab soffits, etc. (The reinforcement being protected by SikaTop® Armatec®-110 EpoCem®).
- Concrete repairs which require fast strength gain; offshore structures such as piers, quay walls, etc.
- Concrete repairs in thick layers with only one shot.
- Concrete repairs which require good abrasion and impact resistance.

#### CHARACTERISTICS / ADVANTAGES

- Excellent adhesion to old concrete.
- Very fast strength gain.
- One component, ready to use, prebagged repair mortar.
- High build-ups possible in one application :
  - For vertical surface almost unlimited.
  - For overhead surfaces 100 to 150 mm.
- Minimum rebound.
- Contain fibres to enhance gunitite performance against impact and abrasion

#### PRODUCT INFORMATION

<b>Packaging</b>	1 000 kg jumbo bag
<b>Shelf life</b>	Minimum shelf life approximately 12 months.
<b>Storage conditions</b>	Store under controlled conditions in original packaging (min. +5 °C, max. +35 °C temperature range).
<b>Appearance and colour</b>	Powder / Grey (mixed material : concrete grey)
<b>Density</b>	Loose Material : ~1.75 kg/L Sprayed Material : ~2.35 kg/L

## TECHNICAL INFORMATION

<b>Compressive strength</b>	24 hours	25 - 30 N/mm <sup>2</sup>	(ASTM C-109)
	7 days	55 - 60 N/mm <sup>2</sup>	at +27 °C / 65% r.h.
	28 days	65 - 70 N/mm <sup>2</sup>	
<b>Tensile strength in flexure</b>	7 days	6 - 8 N/mm <sup>2</sup>	(ASTM C-348)
	28 days	8 - 10 N/mm <sup>2</sup>	at +27 °C / 65% r.h.
<b>Tensile adhesion strength</b>	> 1.5 N/mm <sup>2</sup> (dependant on substrate condition)		

## APPLICATION INFORMATION

<b>Consumption</b>	~2.35 kg of Gunite per sq.m per mm of thickness
<b>Ambient air temperature</b>	+5 °C minimum

## 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

- Store Sikacrete® Gunite-105 FP in dry conditions.
- Apply only to clean sound substrates.
- Never apply to dry substrates.
- Always ensure adequate curing of freshly placed gunite.
- The information contained at technical information is true and accurate to the best of Sika's knowledge. However, in the dry shot process the nozzleman determines the water / cement ratio and therefore the quality of sprayed concrete so that the data quoted herein are subject to variation, depending on the quality of workmanship and other conditions of use beyond our control.

## 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

High quality, long term repairs can only be achieved if they are conscientiously undertaken by experienced applicators, giving adequate attention to detailed to surface preparation, priming of steel, application and curing, etc.

### SUBSTRATE QUALITY / PRE-TREATMENT

Precise and efficient surface preparation is essential to achieve the high adhesive qualities of gunite.

All concrete, mortar and stone substrates must be sound, clean and free from oils, grease and surface contaminants. All loose materials and surface laitance must be removed. Grit or grit/water blasting or scabbling is recommended.

Just prior to application pre-wet and wash down the substrate with water and air pressure from the spraying machine, blowing off any excess surface water with oil free pressurised air before guniting.

### PRIMING (REINFORCEMENT)

Small amount of reinforcement. 24 hours before gunite application, apply 2 coats of brush applied SikaTop® Armatec®-110 EpoCem® to the prepared steel (refer to the SikaTop® Armatec®-110 EpoCem® data sheet).

Large amount of reinforcement. 24 hours before gunite application, apply 2 coats of SikaTop® Armatec®-110 EpoCem® by spray equipment to the prepared steel (refer to the SikaTop® Armatec®-110 EpoCem® data sheet).

### APPLICATION

Sikacrete® Gunite-105 FP is applied by any kind of dry spraying machine. In the dry shot process the nozzleman determines the water content of the mix and therefore the quality of the sprayed mortar. Sikacrete® Gunite-105 FP has been formulated such that they can only be sprayed in the proper water/cement ratio range of 0.35 to 0.40. A lower water/cement ratio results in too much dust and a higher water/cement ratio gives a flowing mortar that will slump off the substrate. For applications to vertical surfaces there is almost no limit to the layer thickness achieved.

able. Overhead repairs should not be sprayed in layers thicker than 100 to 150 mm. After spraying immediately screed off and trowel.

### CURING TREATMENT

Suitable curing methods such as plastic sheet, wet hessian, liquid membrane (eg. Antisol® E -125) etc. must be used to protect the freshly applied gunite from the drying effects of sun and wind.

### CLEANING OF EQUIPMENT

Remove non-hardened gunite from tools and equipment with water. Hardened 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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