BUILDING TRUST

PRODUCT DATA SHEET

# Sikacrete®-105 Gunit AE

(formerly Sikacrete®-Gunit 105)

SILICA FUME BASED GUNITE MORTAR FOR CONCRETE REPAIR

## DESCRIPTION

Sikacrete®-105 Gunit AE is ready to use, one component, un-accelerated, cementitious gunite mortar. Suitable for use in hot and tropical climatic conditions.

## USES

Sikacrete®-105 Gunit AE is typically used in applications for dry-spray gunite such as:

- Concrete repair
- Levelling of large areas
- Cathodic Protection overlay mortar

## FEATURES

- Excellent workability
- Can be trowelled after application
- High density
- High strength mortar
- Good adhesion to the substrate
- Reduced rebound

## PRODUCT INFORMATION

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|---|---|
| **Composition** | Cementitious mortar with silica fume and additives |
| **Packaging** | 25 kg and 40 kg bags |
| **Shelf life** | 12 months minimum from production date |
| **Storage conditions** | Store in a dry area in unopened original packing at temperatures between +5°C and +35°C. Protect from direct sunlight, heat and moisture. |
| **Appearance and colour** | Grey |
| **Maximum grain size** | ~5.0 mm |
| **Density** | ~2.2 kg/l (+20 °C, mixed density) |

## TECHNICAL INFORMATION

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| **Compressive strength** | **w/p ratio = 0.14** | **7 days** | **28 days** | (ASTM C109) |
| | | ≥ 30 N/mm² | ≥ 50 N/mm² | |
| | Note: 50*50*50 mm cubes tested | | | |
| **Modulus of elasticity in compression** | **w/p ratio = 0.14** | **28 days (22 °C)** | | (ASTM C469) |
| | | ≥ 28'000 N/mm² | | |

## APPLICATION INFORMATION

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|---|---|
| **Consumption** | ~22 kg/m² per 10 mm thickness.<br>This figure is theoretical and does not include for any additional material required due to surface porosity, surface profile, variations in level, wastage, rebound, etc..<br>Consumption may vary due to the area to be sprayed (overhead or vertical) as well as the thickness of the applied material. |
| **Layer thickness** | Minimum 15 mm<br>Maximum 80 mm per one single layer |
| **Ambient air temperature** | Min. +5 °C / Max. +40 °C |
| **Substrate temperature** | Min. +5 °C / Max. +40 °C |

## 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.

## 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

- Substrates must be properly cured, structurally sound, free of any loose or friable particles, clean, dry and free of any contaminants such as dust, dirt, oil, grease, cement laitance or efflorescence.
- Depending on the substrate condition and contaminants to be removed from the surface, perform adequate preparation techniques, such as water-jet washing or blast cleaning, in order to remove all traces of any materials that could reduce the product's adhesion to the substrate.
- For applications in hot climates / environments and / or on absorbent substrates, thoroughly pre-dampen the surface immediately prior to the product application, but avoid any ponding / standing water on the surface, which must not be damp to touch and not with a dark-matt / wet surface appearance i.e. it must be saturated surface dry (SSD).
- Steel surfaces shall be prepared using abrasive blast cleaning techniques or high pressure water-blasting to SA 2 (ISO 8501-1)
- Reference shall be made to EN1504-10 for specific requirements.

### BONDING AGENT AND STEEL PROTECTION

When applied over critical substrates or reinforced concrete, damaged by corrosion, use of SikaTop® Armatec®-110 EpoCem as a bonding agent is advised.

### APPLICATION

Sikacrete®-105 Gunit AE should be applied by using a suitable type of dry-spray concrete gun and a skilled nozzle man. Spray application can be started when the substrate has been suitably prepared, (wet down thoroughly the concrete surface, this is best done using the spray nozzle). Add the dry gunite mortar straight into the hopper of the concrete gun; the required water is added at the nozzle and adjusted by the operator.
As soon as the final coat has been sprayed, the dry spray mortar can be leveled. Any areas where the coverage is found to be inadequate must be re-sprayed in proper manner.
Don't use any rebound material for further application.

### CURING TREATMENT

Treatment of exposed surfaces with Sika® Antisol® range curing compound, is highly recommended for large areas of application. Use other approved curing methods such as polyethylene sheeting or wet hessian only for small exposed areas. Do not commence fogging until final set has been reached.

### CLEANING OF EQUIPMENT

Uncured mortar should be removed from tools with water.
To clean dry-spray cement guns, simply blowout the material with compressed air.
Once cured, mortar 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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