

## PRODUCT DATA SHEET

# SikaGunitite® GP

One component Gunitite dry spray applied repair mortar

## DESCRIPTION

SikaGunitite® GP is a cement-based, ready to use, one component mortar. It is applied by mechanical application on vertical and overhead surfaces using the dry spraying process, and can be used in civil or mining applications.

## USES

- Concrete repair of bridges, canals, sewer linings, sea walls, culverts and tunnels.
- Pier and dock supports.
- Sewage treatment plants.
- Marine environments.
- Retaining walls.
- Protection of steel work.
- Embankment protection and stabilisation.

## CHARACTERISTICS / ADVANTAGES

- Easy to use with the addition of potable water.
- Economical.
- High resistance to chloride and sulfates.
- Excellent abrasion resistance.
- Controlled shrinkage.

## APPROVALS / CERTIFICATES

- AS4020:2018 Approved for Potable Water Applications.

## PRODUCT INFORMATION

|                              |  |
|------------------------------|--|
| <b>Packaging</b>             | 20 kg bag and 1000kg bulk bags on request  |
| <b>Appearance and colour</b> | Concrete grey (mixed)  |
| <b>Shelf life</b>            | 9 months from date of production   |
| <b>Storage conditions</b>    | Stored properly in original, unopened and undamaged packaging in dry conditions. |
| <b>Density</b>               | 2,080 kg/m <sup>3</sup>  |
| <b>Maximum grain size</b>    | ~ 2mm  |

## TECHNICAL INFORMATION

|  |   |                       |                                  |
|--|---|-----------------------|----------------------------------|
| <b>Compressive strength</b>  | <u>1 day</u>                            | <u>~ 20 MPa</u>       | (AS 1478.2-A:2005)               |
|  | <u>7 days</u>                           | <u>~ 50 MPa</u>       |                                  |
|  | <u>28 days</u>                          | <u>~ 70 MPa</u>       |                                  |
| <i>Material and curing conditions at 23°C / 50% r.h.<br/>Above results based on 50mm x 50mm cube @ 0.113 w/p ratio</i> |   |                       |                                  |
| <b>Tensile strength in flexure</b>   | <u>1 day</u>                            | <u>6.0 MPa</u>        | (ASTM C348)                      |
|  | <u>7 days</u>                           | <u>9.0 MPa</u>        |                                  |
|  | <u>28 days</u>                          | <u>11.0 MPa</u>       |                                  |
| <b>Tensile strength</b>  | ~ 6.0 MPa at 28 days (Indirect Tensile) |                       | (AS 1012.10)                     |
| <b>Restrained shrinkage / expansion</b>  | ≥ 2.0 MPa at 84 days                    |                       | (EN 12617)                       |
| <b>Electrical resistivity</b>  | <u>28 days</u>                          | <u>~ 89,000 Ω.cm</u>  | (FM 5-578)<br>50mm Probe Spacing |
|  | <u>56 days</u>                          | <u>~ 122,000 Ω.cm</u> |                                  |
|  | <u>90 days</u>                          | <u>~ 148,000 Ω.cm</u> |                                  |

## APPLICATION INFORMATION

|                         |   |
|-------------------------|---|
| <b>Consumption</b>      | Approx. 105 bags per m <sup>3</sup>           |
| <b>Yield</b>            | Approx. 9.52 litre per 20 kg bag              |
| <b>Layer thickness</b>  | 10 mm to 175 mm approximately                 |
| <b>Initial set time</b> | 70 - 80 minutes approx. @ W/P ratio of 0.113  |
| <b>Final set time</b>   | 90 - 120 minutes approx. @ W/P ratio of 0.113 |

## 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.

## IMPORTANT CONSIDERATIONS

- Store SikaGunite-GP in dry conditions.
- Use only potable water at the nozzle. Please consult with technical department, for any initial recommendation on required amount of water.
- Never apply to dry substrates.
- Minimum surface and ambient temperature of 4°C during application.
- Minimum application thickness is 12 mm.

## ECOLOGY, HEALTH AND SAFETY

- Avoid contact with the skin.
- Protective gloves and clothing are recommended when using this product.
- A full Safety Data Sheet is available from Sika on request.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

Precise and efficient surface preparation is essential to achieve the high bond 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 spraying.

### Reinforcement Corrosion Protection:

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

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

## APPLICATION

SikaGunite® GP can be applied dry spraying process. In the dry shot process, the nozzle man determines the water content of the mix and therefore the quality of the sprayed mortar. A lower water/powder ratio can result in too much dust and a higher water/powder ratio can give a flowing mortar that will slump off the substrate. For applications to vertical surfaces up to 175 mm maybe achievable with overhead repairs up to 150mm depending on water addition. After spraying immediately screed off and trowel.

## CURING TREATMENT

Proper curing procedures are important to ensure the durability and quality of the repair. To prevent surface cracking, cure the repair mortar using plastic sheets, wet hession, or curing compounds such as SikaCure.

## CLEANING OF EQUIPMENT

Remove non hardened Gunitite from tools and equipment with water. Hardened material can only be removed mechanically.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product 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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### Product Data Sheet

SikaGunitite® GP

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