

PRODUCT DATA SHEET

Sikacrete[®]-502 Gunitite

Very Rapid setting dry spray mortar

DESCRIPTION

Sikacrete[®]-502 Gunitite is a rapid hardening, prepacked shotcrete material for dry process applications. This product is preblended, prepacked, dry process shotcrete material powered by Rapid Set technology, containing blended aggregates and other carefully selected components. Sikacrete[®]-502 Gunitite has greatly enhanced shooting characteristics providing greatly reduced setting times and very rapid strength development.

USES

Ground support applications for mining, tunneling and other underground openings
Construction of underground bulkheads, backfill barricades, pillars, ventilation walls and other underground concrete structures

CHARACTERISTICS / ADVANTAGES

- Very rapid early age strength development
- Improved adhesion and cohesive plastic properties
- Significantly reduced rebound, resulting in lower material usage
- Superior ability to build greater thicknesses in a single pass in both vertical and overhead orientations

PRODUCT INFORMATION

Packaging	25kg bags			
Shelf Life	12 months			
Storage Conditions	Store in a dry area between +5°C and +30°C. Protect from direct sunlight			
Maximum Grain Size	Dmax: 1mm			
Compressive Strength	2 hours 21 Mpa	1 day 30 Mpa	7 day 40 Mpa	28 day 50 Mpa (ASTM C1604)
Yield	~ 11.25 ltr per 25kg bag			
Initial Set Time	5 minutes			
Final Set Time	10 minutes			

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The concrete substrate must be sound and of sufficient compressive strength (min. 20 N/mm² (MPa) with a minimum pull off strength of 1.5 N/mm² (MPa)).

The surface must be dry and free of all contaminants such as oils, grease, coatings and surface treatments etc.

The concrete substrate must be prepared mechanically to remove cement laitance and achieve a profile open textured surface.

Weak concrete should be removed and surface defects such as honeycombed areas; blowholes and voids must be fully exposed.

Embedded reinforcing steel should be free from scale, rust, oil and grease and treated with a suitable protective coating such as SikaTop Armatec[®] 110 EpoCem[®].

The substrate should be pre-wetted prior to application. When applying over critical substrates or reinforced concrete damaged by corrosion of the underlying steel, the use of SikaTop Armatec[®] 110 EpoCem[®] as a bonding agent is recommended.

MIXING

Sikacrete[®]-502 Gunitite may be applied using a dry-spray gunitite machine. Place the dry Sikacrete[®]-502 Gunitite straight into the hopper of the gunitite machine. The desired water content is added and adjusted at the nozzle.

APPLICATION

Sikacrete[®]-502 Gunitite may be applied using various types of small dry-spray gunitite equipment.

Sikacrete[®]-502 Gunitite is applied in layers to the prepared substrate (**not in one pass**) to build up to the maximum thickness required.

Sikacrete[®]-502 Gunitite cures with minimal shrinkage under moderate weather conditions. Where the work is exposed to intense sunlight, heat or strong air currents, the freshly prepared gunitite mortar should be kept damp and prevented from drying out too rapidly. For optimum performance the material should be applied by an experienced nozzle man and good curing practices should be observed.

Do not re-use the rebound material - Discard it

For finishing purposes Sikacrete[®]-502 Gunitite can be over coated with any of the Sika range of one component repair mortars

CURING TREATMENT

Curing is important where ambient conditions may lead to rapid surface drying, the use of light water fogging for 48 hours or Sika[®] Antisol curing compounds are recommended

CLEANING OF TOOLS

Remove uncured Sikacrete[®]-502 Gunitite from tools and equipment with water. Cured material can only be removed mechanically.

LIMITATIONS

Physical properties of Sikacrete[®]-502 Gunitite may be adversely affected if material is stored in temperatures below 0°C. Material should be allowed to warm to at least 15°C prior to shooting in order to optimise early age compressive strength.

Do not use rebound material

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 performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY HEALTH AND SAFETY

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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