

PRODUCT DATA SHEET

Sikacrete[®]-560

QUICK SETTING WATERPROOFING GUNITÉ (DRY SPRAY)

DESCRIPTION

Sikacrete[®]-560 is a prepackaged, quick setting mortar suitable for dry spray guniting.

USES

A high performance, quick setting repair mortar for dry-spray application to concrete, stone and mortar substrates. Specially designed for application as ready mixed gunité mortar for stopping water surface seepage, securing operations in the prevention of rock-falls during underground structure construction e.g.

- Tunnels and galleries
- Mining
- Culverts, reservoirs, dams

CHARACTERISTICS / ADVANTAGES

- Ready for use, one component material
- Good workability
- Very quick setting
- Very high density
- Excellent adhesion to substrate
- Formulated to minimize dust development
- Layer thickness up to 100 mm in a single application
- Chloride free

PRODUCT INFORMATION

Packaging	25 kg bags
Shelf life	6 months from date of production if stored properly in undamaged, original, sealed packaging.
Storage conditions	Store in dry and cool conditions, protected from direct sunlight.
Colour	Powder / Grey
Granulometry	Grain size 0 - 3.35mm
Bulk Density	Approx. 1.9 kg/L (at 25°C)

TECHNICAL INFORMATION

Compressive Strength	After 6 hours	After 1 day	After 28 days	(Laboratory conditions at 25 °C/ 65% h.r. W/P 14% - Test per ASTM C109)
	~ 6 N/mm ²	~ 32 N/mm ²	~ 45 N/mm ²	

APPLICATION INFORMATION

Consumption	The rate of coverage depends on the surface texture of the substrate, the location of the area to be sprayed (overhead or vertical) and the thickness of the applied coating. As a general guide, allow 25 - 30 kg/m ² per 10 mm applied thickness.	
Initial Set Time	< 120 seconds (at 25°C/65% r.h.) Water : Powder = approx. 14% part by weight	(Laboratory tests)
Final Set Time	< 180 seconds (at 25°C/65% r.h.) Water : Powder = approx. 14% part by weight	(Laboratory tests)

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 CONSIDERATION

- Minimum application temperature: +5 °C
- Minimum application thickness per coat: 10 mm
- Maximum application thickness per coat: 100 mm
- Finished thickness greater than 100 mm must be built up with two or more coats.
- Any rebound material that falls to the floor during the spray process should not be reused.
- As with all concrete and mortars, it is essential to protect Sikacrete®-560 from water evaporation during the crucial early age curing period. We recommend the water curing technique.
- In any applications direction, the layer thicknesses of Sikacrete®-560 is only limited by heat of hydration and subsequent thermal contraction. Areas and layer thickness, both vertical and overhead should follow good concrete practice in this respect

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

Sikacrete®-560 can be applied through most types of conventional dry spray equipment (rotor capacity up 1.1 m³/h , hose diameter (ID) 32 or 38 mm, nozzle diameter as per conveying hose ID). It is advised that the spraying device is a "back inlet" type. Meaning, added water introduction 2.5 m behind the nozzle.

SUBSTRATE QUALITY

Concrete, mortar, stone: surfaces must be cleans and free from all traces of loose material, laitance, oil and grease.

The substrate should be wetted down prior to application.

Iron, steel: surfaces must be clean and free from all traces of oil, grease and rust.

In some case epoxy bonding agent could be re-

quired (please consult Sika Technical Department)

SUBSTRATE QUALITY / PRE-TREATMENT

- All concrete, mortar and rock / stone substrates must be sound, clean and free from oils, grease, dust and other surface contaminants. All loose material and surface laitance must be removed preferably by grit blasting or scabbling.
- The prepared substrate should be thoroughly soaked with clean water until uniformly saturated.
- Immediately before the application of Sikacrete®-560 remove excess water from the substrate surface, to achieve a "saturated surface dry" condition.
- In case of corroded steel reinforcements, they should be cleaned and coated with Sika Mono-Top®-610. Refer to separate data sheet for further information.

MIXING

Sikacrete®-560 has been formulated to ensure that spraying can only be achieved when using the correct water/cement ratio of 0.35 - 0.40. Too little water will result in excessive amounts of dust, whereas too much water will cause excessive slumping and non-adhesion of the mortar.

APPLICATION

Observe and implement Safety measures when working with the dry spraying equipment. Please refer to Equipment Manufacturer's instructions.

Application steps:

- All conveying hoses are connected from the machine to the spraying devices.
- Air from the compressor is supplied to the air machine – valve closed.
- Nozzlemans hold the spraying device.
- Machine operator open air and adjust "air resistance empty".
- Machine operator start the water booster pump and Nozzlemans adjust the water flow accordingly at the nozzle thanks to the valve on the spraying device.
- Machine operator instructs to tip the dry Sikacrete®-560 mortar straight into the hopper of the machine.
- Machine operator starts the machine. Meaning rotor is turning and the Sikacrete®-560 is conveyed into the conveying hose.
- The required water is added and adjusted at the nozzle by the nozzlemans.
- Application should be carried out by an experienced nozzlemans to ensure that satisfactory results are achieved.

CLEANING OF TOOLS

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