

SikaCem[®]-Gunit 133

Polymer Modified Silica Fume Based Gunit Mortar

Product Description SikaCem[®]-Gunit 133 is a one-component, unaccelerated, cementitious polymer-modified silica fume based gunit mortar. Suitable for use in hot and tropical climatic conditions.

Uses SikaCem[®]-Gunit 133 is used as high-performance repair mortar for dry-spray application to concrete, stone and mortar substrates. Suitable for new construction, repairs and maintenance work. Typical applications include:

- Construction of power stations and penstocks
- Tunnels and galleries
- Bridges
- Industrial and residential buildings
- Cathodic Protection overlay mortar

Advantages SikaCem[®]-Gunit 133 is a ready-for-use, one-component material providing the following benefits;

- Superior workability, can be trowelled and screeded after application
- Rapid strength development
- Excellent sulphate resistance and resistant to attack from frost and deicing salts
- Very low permeability to water, chlorides and carbon dioxides
- Excellent adhesion to substrate
- Low modulus of elasticity minimizes risk of scaling or peeling, even at -20°C
- Extremely economical in use, only 5% rebound and minimum dust development
- W/C ratio consistently within the range 0.34 - 0.38

Certificates EMPA, Federal Material Testing Laboratory (Dübendorf, Switzerland)
LPM, Laboratory for Preparation and Methodology (Beinwil am See, Switzerland)

Product Data

Type	Mix of silica fume and other additives
Form	Grey Powder
Packaging	25 kg Bags
Storage Condition	Store in a dry area in unopened original packing at temperatures between +5°C and +35°C. Protect from direct sunlight.
Shelf life	12 months minimum from production date if stored properly in original unopened packaging



Technical Data

Density (at 20°C)	Bulk density = 1.7 kg/lt. Mixed density = 2.2 kg/lt.
Particle Grading	0 - 3 mm
Compressive strength at 23°C	<u>1 day</u> <u>7 days</u> <u>28 days</u> 24-28 N/mm ² 40-45 N/mm ² 45-50 N/mm ²
Flexural strength	9 - 10 N/mm ²
Adhesion	2 - 3 N/mm ² (on concrete, sandblasted)
Modulus of elasticity	24'000 N/mm ² (static)
Index of water vapor diffusion	8x10 ⁻⁶ per °C
Index of Carbon dioxide diffusion	Approximate μH ₂ O = 1'000
Thickness	Minimum 9 mm Maximum 50 mm or build up in more than one coat
Chloride content	Nil (EN 934-2)

Application Details

Coverage	22-24 kg/m ² per 10 mm applied thickness as a general guide. 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.
Surface Preparation	Concrete, mortar, stone: surfaces must be clean and free from all traces of loose material, laitance, oil and grease. Iron, steel: surfaces must be clean and free from all traces of oil, grease and rust. The substrate should be wetted down prior to application (this is normally best done using the spray nozzle). When applying over critical substrates or reinforced concrete damaged by corrosion of the underlying steel, the use of SikaTop-Armatec 110 Epo-Cem as a bonding agent is advised.
Method of Application	Tip the dry SikaCem®-Gunit 133 into the hopper of the cement gun, the required water is added at the nozzle. Special additives ensure that the w/c ratio remains within the optimum range of 0.34 - 0.38, regardless of how the nozzle man regulates the water feed. As soon as the final coat has been sprayed, the gunitite mortar can be trowelled and screeded. Any areas where the coverage is found to be inadequate must be re-sprayed in the proper manner; they should not be patched with fresh rebound material scraped off the floor.
Curing	SikaCem®-Gunit 133 is a polymer-modified cement mortar that cures with minimum shrinkage under normal weather conditions. Where the work is exposed to intense sunlight or strong air currents, the freshly applied mortar should be kept damp and prevented from drying out rapidly. For optimum strengths and performance characteristics the material should be applied by a skilled nozzle man, and good curing practice should be observed at all times.
Cleaning	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.
Equipment	SikaCem®-Gunit 133 may be applied using any type of small dry-spray cement gun. Recommended equipment: ALIVA 240 or 246 Rotor capacity (acc. To model): up to 2 litres Hoses: ø 25/40 or 32/52 Nozzles: ø 25/15 or 32/18, 27
Remarks	For a dense, smooth surface finish, SikaCem®-Gunit 133 can be overcoated with Sika MonoTop 620 or SikaRep Fine. Overpainting can be done with Sikagard or Icosit paints but a primer coat of SikaGard 720 EpoCem is necessary.

Notes 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.

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