

PRODUCT DATA SHEET

Sikacrete[®]-214

Free-flowing structural repair concrete

DESCRIPTION

Sikacrete[®]-214 is a free-flowing, high strength, cementitious micro concrete with a maximum aggregate size of 9 mm.

USES

Sikacrete[®]-214 is used for the structural repair of deteriorated concrete. It is ideal for casting sections or members where the volumes required are too large for conventional grouts, and too small and inaccessible for normal concreting procedures. A typical application is the re-profiling of damaged concrete members, such as the underside of bridge beams, using formwork. Sikacrete[®]-214 provides a compatible surface for the application of Sika coatings and finishes.

CHARACTERISTICS / ADVANTAGES

- Easy to mix, apply and finish
- Economical
- Excellent adhesion
- Shrinkage compensated
- Rapid strength development
- Compatible with the properties of typical concretes
- Vapour permeable
- High resistance to freeze/thaw cycling

PRODUCT INFORMATION

Chemical Base	Cement, Crystalline free Silica, aggregate and additives		
Packaging	Prebatched unit: 25kg	Packaging	
	20kg Cement and graded aggregates	Plastic lined paper bag	
	5kg 6mm aggregate	Plastic Bag	
Shelf Life	12 months in original, unopened packaging		
Storage Conditions	Store in a dry area between 5°C and 40°C. Protect from direct sunlight.		
Appearance / Colour	Powder Grey		
Maximum Grain Size	Dmax. ~9mm		
Density	Fresh mortar density ~2,4 kg/litre		
Compressive Strength	1 Day 34N/mm ²	7 Day 55N/mm ²	28 Day 75N/mm ² (EN12190)
Tensile Strength in Flexure	1 Day 3.8N/mm ²	7 Days 5.7N/mm ²	28 Days 7.5N/mm ² (EN12190)

SYSTEM INFORMATION

System Structure	Primers: Sika Monotop® -1010 or SikaTop ArmaTec® -110 EpoCem® Repair Mortar: Sikacrete® -214 (25 – 200 mm layer thickness)
Mixing Ratio	3.0 -3.12 Litres of water to 25kg bag
Yield	11.0 litres per 25kg bag
Layer Thickness	Min. 25mm - max. 200mm
Ambient Air Temperature	Min 5°C – Max 35°C
Substrate Temperature	Min 5°C – Max 30°C
Pot Life	Approximately 30 minutes

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.

LIMITATIONS

Residues of material must be removed according to local regulations. Fully cured material can be disposed of as household waste under agreement with the responsible local authorities.

Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the Material Safety Data Sheet.

ECOLOGY HEALTH AND SAFETY

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, surface treatments, etc. The 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.

Repairs to substrate, filling of blowholes/voids and surface levelling should be carried out using the appropriate product from the Sikafloor®, Sikadur® and Sikagard® range of materials.

All surfaces must be clean, sound and properly cured. Remove all loose material mechanically, with a wire brush or by water or sand blasting. Embedded reinforcing steel should be free from scale, rust, oil and grease, and treated with a suitable protective coating such as Sika® MonoTop®-1010 or SikaTop Armatec® 110 EpoCem®. The application of a suitable bonding agent, such as Sikadur® -32 ZA or SikaTop Armatec®

110 EpoCem®, is recommended to improve adhesion on large areas or where particularly dense concrete substrates are involved.

MIXING

Mixing can only be achieved using either a slow speed drill (set at 400 - 600 rpm) fitted with a clean, rust free, mixing paddle, or standard mortar mixing equipment. **DO NOT ATTEMPT TO MIX BY HAND.**

Add 3,0 -3,12 litres of water to a suitable mixing vessel and then add Sikacrete®-214 powder slowly whilst mixing. Mix for at least 3 minutes until you have a homogenous mix, then add the 5kg bag of aggregate to the grout and mix until aggregate has thoroughly dispersed and a uniform, free-flowing consistency is obtained. Full mixing time should be 5 minutes.

APPLICATION

Dampen the surface thoroughly with clean water prior to the application of Sikacrete®-214.

Place the mixed Sikacrete®-214 directly after mixing ensuring that any displaced air is allowed to escape. Maintain sufficient hydrostatic head to keep the product flowing.

Protect from rain until initial set has been achieved.

CURING TREATMENT

Where ambient conditions may lead to rapid surface drying, the use of light water fogging for 48 hours or suitable water based curing compound is recommended. (Do not commence fogging until initial set has been reached; typically 1 - 2 hours depending upon ambient conditions).

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

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.

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.

Sika South Africa (Pty) Ltd

9 Hocking Place,
Westmead, 3608
South Africa
Phone +27 31 792 6500
www.sika.co.za



Product Data Sheet

Sikacrete®-214
January 2023, Version 04.01
020302020010000026

Sikacrete-214-en-ZA-(01-2023)-4-1.pdf