

## PRODUCT DATA SHEET

# Sikacrete<sup>®</sup>-114 SA

### FREE FLOWING MICRO-CONCRETE FOR GROUTING AND REPAIR

#### DESCRIPTION

Sikacrete<sup>®</sup>-114 SA is a one component, free-flowing, high strength, non-shrink, cement based micro-concrete.  
Suitable for use in hot and tropical climatic conditions.

#### USES

- Sikacrete<sup>®</sup>-114 SA is used for the structural repair of deteriorated concrete.
- Ideal for casting sections or members where the volumes required are too large for conventional grouts, and too small and inaccessible for normal concreting applications.
- A typical application is the re-profiling of damaged concrete members, using formwork.
- Suitable for base plate grouting where thickness exceeds 100 millimetre.
- Full depth concrete repairs on vertical and overhead surfaces when formed and poured, or formed and pumped with a concrete pump

#### CHARACTERISTICS / ADVANTAGES

- One component, requires the addition of water only
- Reduced waste and risk of mixing failures
- Easy to mix, apply and finish
- Economical
- Excellent adhesion
- Shrinkage compensated
- Rapid strength development
- Compatible with the properties of typical concrete
- Vapour permeable

#### PRODUCT INFORMATION

<b>Composition</b>	Portland cement, selected fillers and aggregates, special additives.
<b>Packaging</b>	50 kg bag
<b>Appearance / Colour</b>	Grey powder
<b>Shelf life</b>	12 months minimum from date of production
<b>Storage conditions</b>	Store in original unopened packaging in cool and dry condition between 5 °C and 35 °C. Protect from direct sunlight, heat and moisture.

## TECHNICAL INFORMATION

<b>Compressive strength</b>		<b>1 Day</b>	<b>7 Days</b>	<b>28 Days</b>	(EN 12390:7)
	5.0 L water/50 kg at 25°C	≥ 30 N/mm <sup>2</sup>	≥ 50 N/mm <sup>2</sup>	≥ 65 N/mm <sup>2</sup>	
<b>Modulus of elasticity in compression</b>	~35 000 N/mm <sup>2</sup>				(ASTM C 469-94)
<b>Tensile strength in flexure</b>	~12 N/mm <sup>2</sup>				(ASTM C348-08)
<b>Tensile adhesion strength</b>	> 1.5 N/mm <sup>2</sup>				(BS 1881)
<b>Chloride ion diffusion resistance</b>	950 Coulombs				(ASTM C1202-15)

## APPLICATION INFORMATION

<b>Mixing ratio</b>	5.0 - 5.25 L of water per 50 kg bag
<b>Fresh mortar density</b>	~2.4 kg/l (25 °C)
<b>Yield</b>	~23.2 L / 50 kg bag
<b>Layer thickness</b>	Min. 50 mm per pour Max. 500 mm per pour
<b>Pot Life</b>	~2 h (25 °C)

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

Concrete surfaces should be clean, rough, sound and free from oil, grease, cement laitance and all loosely adhering particles.

Absorbent surfaces should be saturated thoroughly with clean water.

Metal surfaces (iron and steel) should be free from scale, rust, oil and grease.

### BONDING AGENT AND STEEL PROTECTION

Embedded reinforcing steel should be free from scale, rust, oil and grease, and treated with a suitable anti-corrosion coating such as SikaTop® Armatec® 110 Epo-Cem®, Sikamonotop®-610.

The application of a structural grade bonding agent, such as Sikadur®-32 HI MOD will improve adhesion on large areas or where particularly dense concrete substrates & retrofitting are involved.

### MIXING

Add water according to the desired consistency into a clean mixing vessel before slowly adding the Sikacrete®-114 SA powder. Sikacrete®-114 SA is best mixed in a forced action mixer, for 2 to 3 minutes or until the mix is free of lumps, not longer than 5 minutes.

For best results, first add 4 to 4.5 litre of water and mix for at least 2 minutes or until the larger aggregate has thoroughly dispersed and a uniform, free flowing consistency is obtained.

Then add remaining water and mix for additional 2

minutes.

Do not mix more grout than can be placed within 15 to 20 minutes. Do not add extra water or other ingredients. Mix only full bags for the best result.

### APPLICATION

Before pouring, let the mixed grout stand for 2 to 3 minutes to allow entrapped air to escape.

Maintain sufficient hydrostatic head to keep the product flowing.

Provide channels for the air to escape during grouting. Protect from rain until initial set has been achieved.

### CURING TREATMENT

As per ACI recommendations for Portland-cement concrete, curing is required.

- Moist curing should commence immediately after finishing by a fine mist of water
- Wax based Curing compounds adversely affect the adhesion of following layers of mortar, leveling mortar or protective coatings.
- Left in place forms usually provide satisfactory protection against moisture loss for formed concrete surfaces. The forms are usually left in place as long as the construction schedule allows. If the forms are made of wood, they should be kept moist, especially during hot, dry weather.
- Protect newly applied material from direct sunlight, wind, rain and frost.

### CLEANING OF EQUIPMENT

Clean equipment and mixer after application with water. Hardened material can only be removed mechanically.

## IMPORTANT CONSIDERATIONS

- Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.
- At high ambient temperatures use chilled water for mixing to keep grout temperature below 30 °C.
- In hot weather, base plates and foundations must be shaded from direct sunlight.
- Condition bags < 30 °C prior to use.
- For additional information on Sikacrete®-114 SA or other grouting materials contact Sika Technical Department.
- Elevated temperatures will decrease working time and slump.
- Rate of strength gain will be reduced at colder temperatures. On site testing is recommended.

## BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

## 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 Safety Data Sheet (SDS) 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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All products are supplied  
under a management  
system certified to conform  
to the requirements of the  
quality, environmental and  
occupational health &  
safety standards ISO 9001,  
ISO 14001 and OHSAS  
18001.

### Product Data Sheet

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