

## Sikacrete® -114

### Free Flowing Micro-concrete for Grouting and Repair

**Product Description** Sikacrete® -114 is a one component, free-flowing, high strength, cement based micro-concrete with a maximum aggregate size of 10 mm.

Suitable for use in tropical and hot climatic conditions.

**Uses** Sikacrete® -114 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 applications. A typical application is the re-profiling of damaged concrete members, using formwork. Also suitable for grouting and precision application such as:

- Bridge bearing plates.
- Machine bases.
- Mechanical bridge joints
- Anchor bolts
- Crane rails
- Suitable for base plate grouting where thickness exceeds 50 mm.

- Advantages**
- One component -requires the addition of water only.
  - Reduces waste and risk of mixing failures.
  - Easy to mix, apply and finish.
  - Economical.
  - Excellent adhesion & Non shrinkage.
  - Rapid strength development.
  - Compatible with the properties of typical conditions.
  - Vapour permeable.
  - High resistance to freeze/thaw cycling.

**Approvals / Standards** \* Sikacrete 114 has been tested as per SCAQMD Rule 1168  
Result VOC Content 0 g/L

#### Product Data

<b>Type</b>	Mixture of Portland Cement and graded aggregates
<b>Form</b>	Grey Powder
<b>Packaging</b>	20 kg bag
<b>Storage Condition</b>	Store in a dry area between 5°C and 35°C. Protect from direct sunlight
<b>Shelf life</b>	12 months minimum from production date if stored properly in original unopened packaging

#### Technical Data

**Mixing Ratio** 1.9 – 2.1 litres of water per 20 kg bag or 9.5 – 10.5 % water by weight of powder.

**Density (at 25°C)** Approx. 2400 kg/m<sup>3</sup> (fresh mortar)

<b>Mechanical Strengths (at 25°C) (EN 196-1)</b>	1 day	7 days	28 days
Compressive Strength	30-35 N/mm <sup>2</sup>	45-55 N/mm <sup>2</sup>	60-70 N/mm <sup>2</sup>
Flexural strength			8 -10 N/mm <sup>2</sup>
Bond Strength (Pull off)			~3 N/mm <sup>2</sup>
Modulus of Elasticity (ASTM - C469)			34133.5 MPa



<b>Thickness</b>	Minimum Maximum	50 mm per pour 500 mm per pour
<b>Application Details</b>		
<b>Substrate Preparation</b>	Concrete surfaces should be clean, sound and free from oil, grease, cement laitance and all loosely adhering particles. Absorbent surfaces should be saturated thoroughly. Metal surfaces (iron and steel) should be free from scale, rust, oil and grease.	
<b>Bonding Agent and Steel Protection</b>	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 application of a suitable bonding agent, such as Sikadur-32 or SikaTop Armatec 110 EpoCem, will improve adhesion on large areas or where particularly dense concrete substrates are involved.	
<b>Mixing</b>	<p>Always empty the full contents of the bag into a suitable mixer. Mix DRY for 3 minutes before adding the water.</p> <p>Add 1.9 – 2.1 litres of water per 20 kg bag. Mixing can only be achieved using either a slow speed drill (400-600 rpm) fitted with clean, rust free, mixing paddle, or a forced action mixer.</p> <p><b>DO NOT MIX BY HAND OR USE PART BAG!</b></p> <p>For best results, first add 1.5 – 1.6 ltr. of water and mix for at least 3 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.</p>	
<b>Application</b>	<p>Dampen the surface thoroughly with clean water prior to the application. Before pouring, however, let the mixed mortar stand for 2 - 3 minutes after mixing with water to allow entrapped air to escape.</p> <p>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.</p>	
<b>Curing</b>	Treat exposed surfaces with Antisol-E Curing Compound or use other approved curing methods such as polyethylene sheeting or wet hessian.	
<b>Cleaning</b>	Clean equipment and mixer after application with water. Hardened material can only be removed mechanically.	
<b>Remarks</b>	<p>Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing. At high temperatures use chilled water for mixing to keep mortar temperature below 30°C. In hot weather, base plates and foundations must be shaded from direct sunlight. Condition bags prior to use.</p> <p>For additional information on Sikacrete®-114 or other grouting materials contact our Technical Services Department.</p>	
<b>Safety Instructions</b>		
<b>Precautions</b>	<p>Accidental splashes to the skin must be washed off with water and soap.</p> <p>Accidental splashes to the eyes or mucous membrane must be rinsed with clean warm water. Seek medical attention without delay.</p> <p>Skin barrier cream, safety goggles and rubber gloves are recommended.</p>	
<b>Ecology</b>	Do not dispose of into water or soil but according to local regulations.	
<b>Toxicity</b>	Non-toxic under the relevant health and safety codes.	
<b>Transportation</b>	Non-hazardous.	
<b>Legal notes</b>	<p>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.</p>	



**Sika Egypt for Construction Chemicals**  
 El Abour City  
 1<sup>st</sup> industrial zone (A)  
 Section # 10 Block 13035,  
 Egypt

Tel :+202- 44810580 - 90  
 Fax :+202- 44810459  
 Mob :+20122- 3908855  
 www.sika.com.eg

