

**Product Data Sheet**  
Edition 01/01/2014  
Identification no:  
02 02 01 01 001 0 000018  
SikaGrout®-214

# SikaGrout®-214

High precision, non shrink, expanding pouring grout

Construction

## Product Description

Cement based flowable, two stage expanding grout with selected aggregate.

### Uses

- To grout bearings, machine foundations, columns joints in precast construction etc.
- To grout anchors in concrete
- To grout cavities, gaps and voids in concrete

### Characteristics / Advantages

- Easy to use (ready to mix powder)
- Easy to mix, only add water
- Adjustable consistency
- Very good flow characteristics
- Rapid strength development
- High final strengths
- Initial expansion by gas generation
- Impact- and vibration resistant
- Non-corrosive
- Not flammable, non-toxic
- Shrinkage compensated

## Product Data

### Form

**Appearance / Colour** Grey powder

**Packaging** 30 kg bags

### Storage

**Storage Conditions / Shelf-Life** 6 months from date of production if stored properly in dry conditions in undamaged and unopened original sealed packaging.

## Technical Data

**Chemical Base** Cement, selected fillers and aggregates, special additives

**Bulk Density** ~1.5 kg/l (of fresh grout) at 27 °C

**Grading** 2.36 mm down

**Layer Thickness** 20 mm min. / 100 mm max.

**Standards** ASTM C 1107



## Mechanical / Physical Properties

<b>Compressive Strength</b>	Ambient temperature: +30°C		(According to ASTM C 109 , 70mm Cube)	
	1 day	3 days	7 days	28 days
	25 N/mm <sup>2</sup>	35 N/mm <sup>2</sup>	45 N/mm <sup>2</sup>	65 N/mm <sup>2</sup>

<b>Flexural Strength</b>	Ambient temperature: +30°C		(According to ASTM C 293-79)	
	7 days		28 days	
	7 N/mm <sup>2</sup>		9 N/mm <sup>2</sup>	

**E-Modulus** ~ 37'000 N/mm<sup>2</sup>

## System Information

### Application Details

**Consumption** ~1900 kg/m<sup>3</sup>  
At water: powder ratio 0.14

**Substrate Quality** *Concrete, grout, stone:*  
Surfaces must be sound, clean, free from ice, oils, grease, standing water and any loose or friable particles and any other surface contaminants.  
The concrete "pull off" (tensile) strength should be > 1.0 MPa.  
*Steel, iron:*  
Clean, free from oil or grease, rust and scale etc.

**Substrate Preparation** The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jetting, breakers, blast cleaning, scrabbles, etc.  
The concrete substrates should be pre-soaked with clean water continuously for 2 - 6 hours to ensure a saturated surface dry condition throughout the operation.  
Immediately before pouring remove *all* excess or standing water from within any formwork.

### Application Conditions / Limitations

**Substrate Temperature** +5°C min/+40 °C max

**Ambient Temperature** +5°C min/+40 °C max

### Application Instruction

**Mixing** For Flowable:  
Water : Powder = 0.14 to 0.16 by weight (4.2 l to 4.8 l water per 30 kg bag).  
For Pourable:  
Water : Powder = 0.12 to 0.14 by weight (3.6l to 4.2 l water per 30 kg bag).

**Mixing Time** 3 minutes minimum

**Mixing Tools** Mix grout powder mechanically in the correct ratio with water with low speed (max. 500 rpm) electric drill to avoid entraining too much air.  
Put around 80 to 90% of required water in the mixing drum, followed by SikaGrout<sup>®</sup> 214 and then add the balance water.  
Dependent on the desired consistency and flow properties, the mixing ratio can be adjusted. Don't use concrete tilting mixer.  
Do not mix more grout, which cannot be used within Pot Life. DO NOT ADD EXTRA WATER.

<b>Application Method</b>	<p>Pour grout immediately after mixing into the prepared openings. Ensure that air displaced by the grout can easily escape; otherwise entrapped air will prevent full contact grouting. Wet porous substrates to saturated surface dry condition.</p> <p>When grouting base plates etc., ensure that a continuous and sufficient head of pressure is maintained to keep the grout flowing. To make optimum use of the products expansion properties, apply the grout as quickly as possible (within max. 15 minutes).</p>
<b>Cleaning of Tools</b>	<p>Clean all tools and application equipment with water immediately after use. Hardened/cured material can only be mechanically removed.</p>
<b>Pot life</b>	<p>~ 20 minutes at +30°C</p>
<b>Notes on Application / Limitations</b>	<p>Use SikaGrout-214 for grouting only; do not use SikaGrout®-214 for patch repair work etc.</p> <p>Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.</p> <p>Use chilled water for mixing in case of high ambient temperature.</p> <p>Use hot water for mixing in case of very low ambient temperature.</p> <p>Depending on requirements and site conditions the addition of dry, single size and clean aggregates is possible. Trials are recommended to confirm suitability of aggregates to be used.</p> <p>For large bedding holes and higher gaps duly washed coarse aggregates of size 6mm down may be mixed with SikaGrout®-214 in the proportion of grout: aggregate= 2:1 (by weight).</p> <p>For additional technical information on SikaGrout®-214 or other grouting materials contact the technical services department.</p>
<b>Curing Details</b>	
<b>Curing Treatment</b>	<p>Keep any visible, exposed grout surfaces as small as possible and protect from premature drying out by suitable measures (keep moist, cover with wet Hessian etc.).</p>
<b>Value Base</b>	<p>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.</p>
<b>Health and Safety Information</b>	<p>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.</p>
<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 India Pvt. Ltd.  
 Commercial Complex II  
 620, Diamond Harbour Road  
 Kolkata, 700 034, India

Phone +91 33 2447 2448/2449  
 Telefax +91 33 2468 8688/2665  
 www.sika.in  
 info@in.sika.com