

# PRODUCT DATA SHEET

## SikaGrout<sup>®</sup>-214-11

### HIGH STRENGTH, NON-SHRINK CEMENTITIOUS GROUT

#### DESCRIPTION

A non-shrink, cementitious grout, with a unique shrinkage compensating mechanism. It is non-metallic and contains no chloride. With a special blend of shrinkage-reducing and plasticizing/water-reducing agent, SikaGrout<sup>®</sup>-214-11 is a shrinkage compensated material.

#### USES

For grouting over a wide range of applications:

- For structural grouting of column base plates, machine base plates, anchor rods, bearing plates, precast wall panel, curtain walls
- Multiple fluidity allows easy of placement : Ram in place as a dry pack, trowel apply as a medium flow, pour or pump as a high flow grout.
- For grouting method of concrete repair.

#### CHARACTERISTICS / ADVANTAGES

- Easy to use, just add water
- Adjustable consistency
- Rapid strength development
- High final strength
- Shrinkage compensated
- Non-flammable, non-toxic
- Non-Corrosive
- Marine structure: Also recommended for repairing structure underwater and in tidal zone grouting with high strength requirement.
- Repair application of : Bridge piers, Concrete Piles, Harbour walls, Jetty Pillars

#### PRODUCT INFORMATION

<b>Packaging</b>	25 kg bag
<b>Appearance / Colour</b>	Powder / Grey
<b>Shelf Life</b>	9 months from date of production in stored in undamaged and unopened original sealed bags.
<b>Storage Conditions</b>	Store in dry condition between 10 °C - 30 °C
<b>Density</b>	~2.19 kg/L

## TECHNICAL INFORMATION

<b>Compressive Strength</b>	1 day	~27.0 N/mm <sup>2</sup>	(ASTM C-109)
	3 days	~44.0 N/mm <sup>2</sup>	
	7 days	~60.0 N/mm <sup>2</sup>	
	28 days	~72.0 N/mm <sup>2</sup>	
<b>Tensile Strength in Flexure</b>	28 days	> 6.5 N/mm <sup>2</sup>	(ASTM C-348)
<b>Expansion</b>	at 27 °C	0.30 – 1.40 %	(ASTM C-940)
<b>Tensile Adhesion Strength</b>	28 days	~1.5 N/mm <sup>2</sup> (Concrete failure, over mechanically roughened concrete surface)	
	28 days	~2.5 N/mm <sup>2</sup> (Over mechanically roughened grout surface)	

## APPLICATION INFORMATION

<b>Mixing Ratio</b>	4.25 L per 25 kg bag (water per powder = 17 % by weight)		
<b>Consumption</b>	~ 1 880 kg/m <sup>3</sup> of mortar.		
<b>Yield</b>	13.30 L per 25 kg bag		
<b>Layer Thickness</b>	Recommended thickness is 20 - 100 mm		
<b>Flowability</b>	Flowable (sec)	8 - 20 s	(Mod J Cone)
<b>Product Temperature</b>	< 30 °C		
<b>Ambient Air Temperature</b>	10 °C - 35 °C		
<b>Substrate Temperature</b>	10 °C - 35 °C		
<b>Pot Life</b>	25 min		
<b>Setting Time</b>	4 - 7 h		

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

- Remove all dirt, oil, grease, loose material and other bond-inhibiting materials.
- Anchor bolts to be grouted must be degreased with suitable solvent.
- Concrete must be sound and roughened to promote mechanical adhesion.
- Prior to pouring, surface must be wetted to saturated surface dry.

### FORMING

For flowable grout, construct forms to retain grout without leakage. Forms should be lined or coated with bond-breaker for easy removal. If tight form is difficult to achieve, use SikaSet Accelerator as water plug (refer to PDS SikaSet Accelerator).

### MIXING

Put appropriate quantity of water (depend on the required consistency) into a mixing vessel. Add slowly the total contents of SikaGrout®-214-11 while mixing. Mix continuously for 4 minutes to achieve an even

consistency. Use a mechanically low speed drill (400–600 rpm) with mixing paddle or in appropriately sized mortar mixer.

### APPLICATION

Within 25 minutes after mixing, place grout into forms from one side to avoid air entrapment. Do not vibrate. Use a suitable head box of 150–200 mm and maintain the grout head all times to ensure a continuous flow. Gentle tapping or pulling loops of wire from one side may assist the flow of the mortar under difficult working conditions.

### CURING TREATMENT

Wet cure for a minimum of 3 days with wet hessian, plastic sheet or apply a curing compound (Antisol)

### CLEANING OF TOOLS

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

## LIMITATIONS

- Minimum application thickness : 10 mm
- Recommended thickness of SikaGrout®-214-11 in one pour is 20 mm to 100 mm.
- If the thickness exceeds 100 mm, special procedure must be taken to anticipate temperature rise. Iced water, add coarse aggregate to the mix (max. 40% by powder weight), or both of them may be used to eliminate temperature rise.
- Variations in cement could cause shade differences in colour of the mortar.

## 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.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Please 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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