

# PRODUCT DATA SHEET

## SikaGrout<sup>®</sup>-214-11

SHRINKAGE COMPENSATED, PUMPABLE, CEMENTITIOUS GROUT

### DESCRIPTION

SikaGrout<sup>®</sup>-214-11 is shrinkage compensated, self-levelling, pre-mixed cementitious grouting mortars with extending working time to suit local ambient temperature.

### USES

SikaGrout<sup>®</sup>-214-11 is suitable for the following grouting works:

- Machine foundations;
- Rails beds;
- Columns in precast construction;
- Anchor bolts;
- Bridge bearings;
- Cavities;
- Gaps;
- Recesses;
- High strength repair.

### CHARACTERISTICS / ADVANTAGES

SikaGrout<sup>®</sup>-214-11 is economical and easy to use. Other beneficial properties are:

- Excellent flowability;
- Good dimensional stability;
- High strength, adjustable consistency;
- No bleeding;
- Non toxic, non corrosive;
- Ready to use, requires only the addition of water;
- Impact and vibration resistant;
- Can be placed with suitable grout pump.

### APPROVALS / STANDARDS

- Local test report is available

### PRODUCT INFORMATION

Packaging	25 kg bag
Appearance / Colour	Powder / Concrete grey
Shelf life	6 months from date of production if stored properly in unopened, original packaging
Storage conditions	Dry, cool, shaded place
Density	~ 1.60 kg/l (bulk density of powder) ~ 2.20 kg/l (density of fresh mortar)

### TECHNICAL INFORMATION

<b>Compressive Strength</b>	1 day	≥ 25 N/mm <sup>2</sup>	(ASTM C349 / C109)
	3 days	≥ 41 N/mm <sup>2</sup>	
	7 days	≥ 52 N/mm <sup>2</sup>	
	28 days	≥ 60 N/mm <sup>2</sup>	
At 27 °C			
<b>Expansion</b>	≥0.1 %		(ASTM C940 - 89)
At 27 °C / 65 % r.h (at 3h)			

## APPLICATION INFORMATION

<b>Mixing ratio</b>	SikaGrout®-214-11 : Water = 1 : 0.13-0.15 (parts by weight) Water content: 13-15 % Consistency: Water requirement can be from 3.25 to 3.75 litres per 25 kg bag depending on the required consistency. At 27 °C / 65 % r.h		
<b>Yield</b>	1 bag yields approx. 13.10 litres of mortar Approx. 76 bags required for 1 (one) m <sup>3</sup> of mortar		
<b>Layer Thickness</b>	Min. gap: 10 mm Max. gap: Please contact Sika Technical Service Department		
<b>Flowability</b>	Flow table spread	25–32 cm	(ASTM C230-90, no strokes)
At 27 °C / 65 % r.h			
<b>Ambient Air Temperature</b>	Min. 10 °C Max. 40 °C		
<b>Setting Time</b>	Initial setting time	≥ 5 h	(ASTM C403 - 90)
	Final setting time	≤ 12 h	
At 27 °C / 65 % r.h			

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY / PRE-TREATMENT

Concrete surfaces should be clean, sound and free from oil, grease, laitance and loose particles. Metal surfaces (iron and steel) should be free from scale, rust, oil and grease. Absorbent substrates must be saturated thoroughly, but no standing water.

### MIXING

Powder should be added to the pre-gauged water to suit the desired consistency. Mix mechanically for at least 3 minutes with a low speed electric drill (max. 500 r.p.m.) with a disc agitator or attached, until a smooth consistency is achieved. Mixing equipment such as two arms, forced action basket/pan type mixer can also be used.

### APPLICATION

Pour mortar after mixing. Ensure that air entrapped into the grout is allowed to escape. When carrying out base plate grouting, ensure sufficient pressure head is maintained to keep mortar flow uninterrupted. Make sure that necessary form work is firmly in place and watertight. To achieve optimum expansion result, apply mortar as quickly as possible.

#### Grouting of machine beds

Pre-wet thoroughly, no standing water in bolt holes. If possible, grout anchor first, and the mortar bed in the

second operation. Ensure continuous flow of mortar.

#### Grouting base plate

Prewetting for approx. 24 hours, no standing water. Maintain constant hydro-static pressure to continuous flow. Use steel rods or chain to make sure that all cavities are filled. Make sure that entrapped air can escape easily.

#### Grouting of large cavities / large volume

Depending on the volume to be filled and thickness of gap, large aggregates, e.g. 4–8 mm, 8–16 mm or 16–32 mm may be added to the SikaGrout®-214-11 at a ratio of between 50-100% by weight of SikaGrout®-214-11 powder. Round aggregates are more suitable than crushed ones.

As a rule of thumb, minimum thickness of gap to be grouted shall be 3 times max. grain size diameter of aggregate.

For grouting large section thicker than 60 mm, addition of large aggregate and/or use of cold water will minimize temperature rise generated during early hardening period.

Special anchoring (rock bolt in tunnels). Please consult Sika for additional information on anchoring and grouting products.

### CURING TREATMENT

Keep visible, free mortar surface as small as possible and protect it from premature drying out by standard curing practice (keep moist, cover with wet hessian, use of curing compound e.g. Antisol® E).

## CLEANING OF TOOLS

Clean all tools and equipment with water immediately after use.

Hardened mortar can only be removed mechanically.

## IMPORTANT CONSIDERATION

Minimum application temperature is 10 °C. At temperature lower than 20 °C setting time and strength gain will be slower.

Normal curing practice should be observed for at least 3 days wherever mortar is exposed.

In case of grouting large cavities/volume, SikaGrout®-214-11 is the most suitable

## 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.

The strength values mentioned are average values of laboratory tests.

The results on the site may vary due to different environment, curing conditions and testing.

Trials should be always conducted before application.

Always refer to the latest updated product data sheet.

## LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

## ECOLOGY, HEALTH AND SAFETY

**Ecology:** Do not dispose into water

**Transportation class:** Non-hazardous

**Waste disposal:** According to local law

**Important notes:** SikaGrout®-214-11 is cement base and is therefore alkaline. Suitable precautions should be taken to minimize direct contact with the skin. If the material gets into the eyes, rinse immediately with clean water and seek medical attention.

## 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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