

## PRODUCT DATA SHEET

# SikaGrout<sup>®</sup>-214-11 HS

Shrinkage compensated, high early strength, cementitious grout

### DESCRIPTION

SikaGrout<sup>®</sup>-214-11 HS is a ready to use, shrinkage compensated, non ferrous, high early strength, self-levelling, bearing grout. Pre-mixed and selectively graded materials result in a dense homogeneous mix.

### USES

SikaGrout<sup>®</sup>-214-11 HS is designed to counteract the normal shrinkage of mortar and concrete and to absorb and minimize effects of vibration on foundations. The high early strength property is suitable for work that requires early loads including machine bases structural columns, prestressed girders, bridge bearings, rail posts and seatings bolts etc.

### CHARACTERISTICS / ADVANTAGES

- Excellent flowability
- Good dimensional stability
- Controlled expansion
- Chlorides-free; will not rust, bleed, or harm metal on contact
- High early compressive strength; allows earlier loading and minimizes costs
- High early strength produces minimal downtime for maintenance and repairs
- Non toxic, non corrosive
- Ready and easy to use
- Economical

### APPROVALS / STANDARDS

Local test report is available

### PRODUCT INFORMATION

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

### TECHNICAL INFORMATION

Compressive Strength	1 day	≥ 40 N/mm <sup>2</sup>	(ASTM C349 / C109)
	3 days	≥ 60 N/mm <sup>2</sup>	
	7 days	≥ 70 N/mm <sup>2</sup>	
	28 days	≥ 80 N/mm <sup>2</sup>	
Expansion	≥ 0.1%	(At 3 hrs @27°C / 65% r.h) (ASTM C940)	
	Bleeding: Nil (ASTM C940)		

## APPLICATION INFORMATION

<b>Mixing ratio</b>	~3.25–3.50 litres of clean water per 25 kg bag Water content: 13–14% (At 27°C / 65% r.h.)	
<b>Consumption</b>	1 bag yields approx. 13 L of mortar Approx. 77 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>	25–32 cm (At 27°C / 65% r.h.)	(ASTM C230, no strokes)
<b>Substrate Temperature</b>	Min. 10°C Max. 40°C	
<b>Setting Time</b>	<u>Initial setting time</u> ≥ 5 h <u>Final setting time</u> ≤ 12 h (At 27°C / 65% r.h.)	(ASTM C403)

## 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 environments, curing conditions and testing. Trials should be always conducted before application. Always refer to the latest updated product data sheet.

## 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.

## ECOLOGY, HEALTH AND SAFETY

**Ecology:** Do not dispose into water  
**Transportation class:** Non-hazardous  
**Waste disposal:** According to local law  
**Important notes:** SikaGrout 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.

## 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 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 entrained 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 HS mortar at a ratio of between 50-100% by weight of SikaGrout®-214-11 HS powder. Round aggregates are recommended while flaky ones should be avoided to maintain the workability and strength.

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

Addition of large aggregate and/or use of cold water will minimize temperature rise generated during early hardening period of SikaGrout®-214-11 HS. Always

conduct trial in advance to test the workability and effectiveness in reducing temperature when using large aggregates and/or cold water.

### CURING TREATMENT

Protect mortar surfaces from premature drying out by standard curing practice (keep moist, cover with wet hessian, use of curing compound e.g. Sika Antisol® E).

### CLEANING OF TOOLS

Clean all tools and equipment with water immediately after use. Hardened mortar can only be removed mechanically.

### 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.

## 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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#### Product Data Sheet

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