

PRODUCT DATA SHEET

SikaGrout[®]-214 HK

Multi-Purpose Non-shrink (shrinkage compensated) Cementitious Grout

DESCRIPTION

SikaGrout[®]-214 HK is a non-shrink (shrinkage compensated) modified cementitious grout.

USES

- Machine foundations
- Columns in precast construction
- Concrete anchors
- Bridge bearings
- Cavities
- Gaps
- Recesses
- Rail beds

CHARACTERISTICS / ADVANTAGES

SikaGrout[®]-214 HK is an economical and easy to use material requiring the simple addition of water. Other beneficial properties are :

- Easy to mix and apply
- Good flow characteristics
- Rapid strength development
- High ultimate strengths
- Impact resistant
- Non-corrosive
- Non-metallic and chloride free
- Shrinkage compensation ability

APPROVALS / STANDARDS

Product conformity certification scheme for repair mortars PCCS-RM issue 2 Hong Kong Concrete Institute (type 5 certification scheme as defined in the ISO/IEC 17067:2013)

PRODUCT INFORMATION

Chemical Base	Cement based powder
Packaging	25 kg bags
Shelf Life	6 months from date of production.
Storage Conditions	Stored properly in undamaged and unopened original sealed packaging in cool dry conditions. Protect from direct sunlight and frost.
Appearance / Colour	Grey powder
Density	~ 1.6 kg/litre (powder) ~ 2.2 kg/litre (depending on consistency and temperature) (Temperature : 23 °C)

TECHNICAL INFORMATION

Compressive Strength	> 37 MPa @ 1 day > 50 MPa @ 7 days > 60 MPa @ 28 days According to HKHA/MTS (2014/2016) Specification Part D clause 2.1.1 (Package D)	
Tensile Strength in Flexure	7.1 MPa @ 1 day 9.2 MPa @ 28 days	(BS6319 : Part 3 : 1983)
Tensile Strength	3.1 MPa @ 1 day 4.4 MPa @ 28 days	(BS6319 : Part 7 : 1985)
Bleeding	0 %	(ASTM C940-98a)

APPLICATION INFORMATION

Mixing Ratio	Approx. 5 litre water per 25 kg bag (flow consistency)		
		<u>Flowable</u>	<u>Trowelable</u>
	<u>Water Content/bag</u>	4.0-5.4 Litre	3.4-3.6 Litre
	<u>Volume</u>	~13.2 / 14.2 Litre	~13 Litre
	<u>Coverage (bags/m³)</u>	~76 / 71	~78
Flowability	< 35 s (Flow Cone Time) Test Method <ul style="list-style-type: none"> ▪ HKHA/MTS (2008/2010) Specification Part D Clause 2.1.20 ▪ HKHA/MTS (2014/2016) Specification Part D Clause 2.1.20 		
Pot Life	2 hours		

BASIS OF PRODUCT DATA

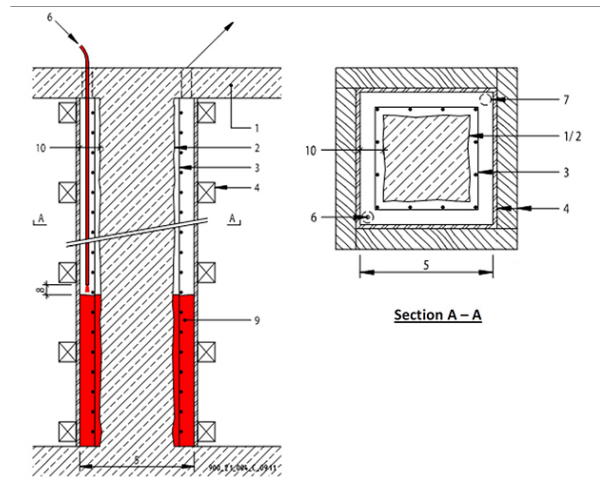
All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER DOCUMENTS

Maximum application thickness per pour is 100 mm and minimum is 10 mm.
 Maximum application thickness per pour with aggregates is 500 mm.
 At temperature 20 °C and below, setting time and strength development will be slower. Non-shrink grout contains additives which expand either during the plastic stage and/or the hardening stage to compensate for the shrinkage of the cementitious matrix. However, non-shrink property will be effective only if the material is not subjected to water loss.
 *Application thickness in different construction method:

-Pouring Method

The detail is for illustration purposes and not to be used as a construction drawing.

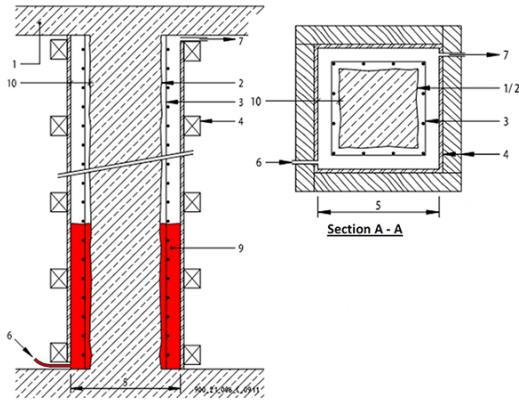


Elevation Section

- 1 Host concrete structure
- 2 Prepared concrete substrate
- 3 Cleaned and prepared steel reinforcement bars
- 4 Formwork
- 5 Extent of refurbished concrete
- 6 Opening made in existing structure for material application
- 7 Opening made in existing structure for air release
- 8 Maintain application ~ 2 cm above material level
- 9 SikaGrout®-214 HK
- 10 Application thickness = 100mm max

-Pumping Method

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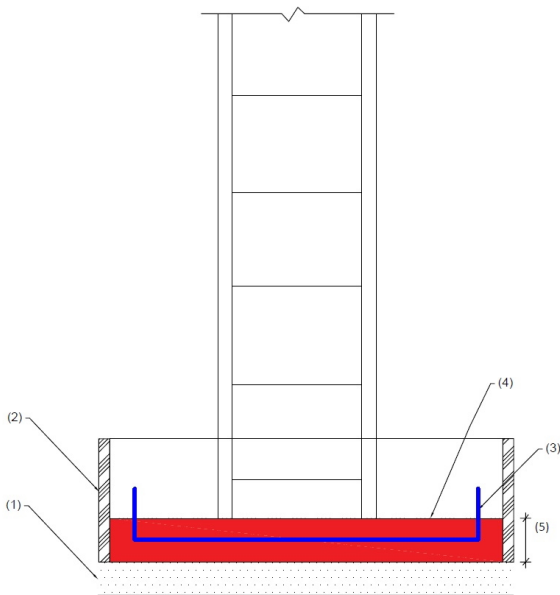
Elevation Section

- 1 Host concrete structure
- 2 Prepared concrete
- 3 Cleaned and prepared steel reinforcement bars
- 4 Formwork
- 5 Extent of refurbished concrete
- 6 Special valve in formwork to pump in material
- 7 Valve in top of formwork for air release
- 9 SikaGrout®-214 HK
- 10 Application thickness = 100mm max

-Flat Area Method

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ELEVATION SECTION



- 1 Blinding layer
- 2 Formwork
- 3 Cleaned and prepared steel reinforcement bars
- 4 SikaGrout®-214 HK
- 5 Application thickness = 100mm max

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 Material Safety Data Sheet (MSDS) containing physical, ecological, toxicological and other safety-related data.

VOC DATA

< 10 g/L

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete surfaces should be clean, sound and free from oil, grease, laitance and loosely adhering particles.

Metal surfaces (iron and steel) should be free from scale, rust, oil and grease.

All absorbent surfaces must be well saturated with clean water, but be free of any surface water or puddles prior to the application of SikaGrout®-214 HK.

MIXING

Place 70–80 % of the premeasured clean water (depending on consistency required - refer to 'Mix Ratio') into a clean container and gradually add the whole bag of SikaGrout®-214 HK into it while continuously mixing. Add the remaining water until the desired consistency is obtained. Mix for 2–3 minutes with a low speed drill (maximum 500 rpm) until the mixture become homogeneous. Hold the fresh mortar in the container for 1–2 minutes, and then mix again for 1–2 minutes.

APPLICATION

After mixing, stir lightly with a spatula for a few seconds to release any entrapped air. The grout is then poured immediately into the prepared formwork. When carrying out base plate grouting, ensure sufficient pressure head is maintained for uninterrupted mortar flow. For formwork repair, the prepared formwork must be firmly in place and kept watertight. When placing grout over a large area, it is important to maintain a continuous flow throughout. Work sequence must be properly organized to ensure an uninterrupted flow.

For sections thicker than 100 mm or for large grouting areas, it is necessary to mix SikaGrout®-214 HK with graded 10 mm silt free aggregates to minimize temperature rise generated during curing stage. The quantity of aggregates should not exceed 1 part aggregates to 1 part SikaGrout®-214 HK by weight. Other precautions such as the use of chilled water, insulation of the formwork or baseplate may be required. Please consult Technical Service Department for assistance. To further ensure that air entrapped during mixing is allowed to fully escape, it may be necessary to make breather holes. Use steel rods or chains to assist the flow of grout where necessary.

CLEANING OF TOOLS

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

LOCAL RESTRICTIONS

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

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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