

PRODUCT DATA SHEET

SikaGrout[®]-214 TR

HEAT RESISTANT, HIGH PRECISION, NON SHRINK, EXPANDING POURING GROUT

DESCRIPTION

SikaGrout[®]-214 TR is a ready to use, heat resistant, cement based flowable, expanding grout for grouting for special applications where high temperature or thermal gradients are expected.

USES

- Blast furnace grouting
- Chimney grouting
- Flooring around furnace

CHARACTERISTICS / ADVANTAGES

- Effective in functioning around 500°C
- 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
- Expands by gas generation whilst in the plastic state of curing
- Impact and vibration resistant
- Non-corrosive
- Not flammable, non-toxic
- Shrinkage compensated

PRODUCT INFORMATION

Chemical Base	Cement, selected fillers and aggregates, special additives
Packaging	30 kg bag
Appearance / Colour	Grey Powder
Shelf Life	6 months from date of production
Storage Conditions	Store properly in dry conditions in undamaged and unopened original sealed packaging.

TECHNICAL INFORMATION

Compressive Strength	<u>1 day</u>	<u>≥ 25 N/mm²</u>	(ASTM C109)
	<u>3 days</u>	<u>≥ 35 N/mm²</u>	
	<u>7 days</u>	<u>≥ 45 N/mm²</u>	
	<u>28 days</u>	<u>≥ 65 N/mm²</u>	
70mm Cube, Ambient Temperature : +30°C			
Tensile Strength in Flexure	<u>7 days</u>	<u>≥ 5.0 N/mm²</u>	(ASTM C293)
	<u>28 days</u>	<u>≥ 7.0 N/mm²</u>	
Ambient Temperature : +30°C			

APPLICATION INFORMATION

Mixing Ratio	Consistency	Water : Powder	Qty of water required per bag
	Flowable	0.15 to 0.16 by weight	4.5 L to 4.8 L
	Pourable	0.14 by weight	4.2 L
Consumption	2000 - 2200 kg/m ³		
Layer Thickness	20 mm min. / 100 mm max		
Ambient Air Temperature	+5°C min. / +40°C max.		
Substrate Temperature	+5°C min. / +40°C max.		
Pot Life	~20 minutes at +30°C		

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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, blastcleaning, scabblers, 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

MIXING

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®-214 TR, mix for around 3 minutes and then add the balance water. Dependent on the desired consistency and flow properties, the mixing ratio can be adjusted. Do not mix more grout, which cannot be used within Pot Life.

DO NOT ADD EXTRA WATER.

APPLICATION

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.

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).

CURING TREATMENT

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.)

CLEANING OF TOOLS

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

LIMITATIONS

- Do not use SikaGrout®-214 TR for patch repair work etc.
- Ensure formwork is secure and watertight to prevent movement and leaking during placing and curing.
- Use chilled water for mixing in high ambient temperature.
- 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.
- For large bedding holes and higher gaps duly washed coarse aggregates of size
- 6mm down aggregates may be mixed with SikaGrout®-214 TR in the proportion of grout : aggregate = 2 : 1 (by weight).
- Consider approx 25 - 30% reduction in mechanical properties when exposed to high temperatures.
- For additional technical information on SikaGrout®-214 TR or other grouting materials contact the Sika® Technical Services.

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 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

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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