

PRODUCT DATA SHEET

SikaGrout[®]-214 IN S

HIGH PRECISION, SHRINKAGE COMPENSATED, FLOWABLE GROUT

DESCRIPTION

Cement based flowable, expanding grout with selected aggregate.

USES

- To grout bearings, machine foundations.
- To grout anchors in concrete
- To grout cavities, gaps and voids in concrete

CHARACTERISTICS / ADVANTAGES

- 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
- Initial expansion by gas generation
- Impact- and vibration resistant
- Non-corrosive
- Not flammable, non-toxic
- Shrinkage compensated

PRODUCT INFORMATION

Chemical Base	Cement, special additives, and aggregates
Packaging	30 kg bags
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.
Maximum Grain Size	2.36 mm

TECHNICAL INFORMATION

Compressive Strength	<u>1 day</u>	<u>25 N/mm²</u>	(ASTM C 109)
	<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			
Modulus of Elasticity in Compression	E-Modulus : ~ 37000 N/mm ²		
Tensile Strength in Flexure	<u>7 days</u>	<u>7 N/mm²</u>	(ASTM C 293-79)
	<u>28 days</u>	<u>9 N/mm²</u>	
Ambient Temperature +30°C			
Tensile Adhesion Strength	<u>7 days</u>	<u>5 N/mm²</u>	(ASTM C 882)
	<u>28 days</u>	<u>7 N/mm²</u>	
This is also referred to as Bond Strength			
Expansion	Upto 4%		(ASTM C 1090)

APPLICATION INFORMATION

Consumption	~2300 kg/m ³ At water: powder ratio 0.14 - 0.16
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.

The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water jetting, breakers, blast cleaning, scrabbles, 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

For Flowable: Water : Powder = 0.15 to 0.16 by weight (4.5 l to 4.8 l water per 30 kg bag).

For Pourable: Water : Powder = 0.14 by weight (4.2 l water per 30 kg bag)

Mixing Time: 3 minutes minimum

Mixing Tools

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 IN S and then add the balance water.

Dependent on the desired consistency and flow properties, the mixing ratio can be adjusted. Don't use concrete tilting mixer.

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

Use SikaGrout®-214 IN S for grouting only; do not use SikaGrout®-214 IN S 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 case of high ambient temperature.

Use hot water for mixing in case of very low 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 may be mixed with SikaGrout®-214 IN S in the proportion of grout: aggregate= 2:1 (by weight).

For additional technical information on SikaGrout®-214 IN S or other grouting materials contact the technical services department.

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 Material Safety Data Sheet 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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