

PRODUCT DATA SHEET

SikaGrout[®]-220

High strength shrinkage compensated cementitious grout

DESCRIPTION

SikaGrout[®]-220 is a high strength, non-shrink, self-levelling, prebagged cementitious grouting mortar with extended working time to suit local ambient temperatures.

USES

SikaGrout[®]-220 is for grouting in the following locations with clearances of 10 mm or more:

- Machine foundations
- Columns in pre-cast construction
- Concrete anchors
- Cavities
- Gaps
- Recesses
- Rail beds

CHARACTERISTICS / ADVANTAGES

SikaGrout[®]-220 is an economical and easy to use material requiring only the addition of water. Other beneficial properties are:

- Easy to mix and apply
- Good flow characteristics
- Very high early and ultimate strength
- Impact resistant
- Non-corrosive
- Non-toxic
- Iron and chloride free
- Dense and non-shrink (2-step expansion)
- Extended working time

PRODUCT INFORMATION

Packaging	25 kg bag
Appearance / Colour	Grey premixed powder
Shelf Life	6 months from the date of production
Storage Conditions	Store properly in original, unopened and undamaged sealed packaging in dry conditions. Protect from direct sunlight.
Maximum Grain Size	2.4 mm

TECHNICAL INFORMATION

Compressive Strength	Flowable consistency		
	1 day	> 30 N/mm ²	(EN 12190:1999)
	3 days	> 61 N/mm ²	at 20 °C
	7 days	> 65 N/mm ²	
	28 days	> 80 N/mm ²	
Expansion	Flowable consistency		
	≥ 0.5 % at 24 hours		(ASTM C 940)

APPLICATION INFORMATION

Mixing Ratio	Flowable consistency 4–4.2 L water / 25 kg of grout * Kindly consult Sika Technical Department for the correct dosing which is mandatory.												
Yield	Flowable consistency <table border="1"><tr><td></td><td>1.92 kg</td><td>25 kg</td><td>77 × 25 kg bag</td></tr><tr><td>Water</td><td>0.32 L</td><td>4.2 L</td><td>323 L</td></tr><tr><td>Volume mortar</td><td>1 L</td><td>13 L</td><td>1 m³</td></tr></table>		1.92 kg	25 kg	77 × 25 kg bag	Water	0.32 L	4.2 L	323 L	Volume mortar	1 L	13 L	1 m ³
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Volume mortar	1 L	13 L	1 m ³										
Layer Thickness	100 mm max. per pour / 10 mm min. per pour												
Flowability	Flowable consistency <table border="1"><tr><td>3 minutes</td><td>30 minutes</td><td>(EN 1015-3)</td></tr><tr><td>270–300 mm</td><td>> 250 mm</td><td></td></tr></table>	3 minutes	30 minutes	(EN 1015-3)	270–300 mm	> 250 mm							
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Setting Time	Flowable consistency 4 hours (Initial setting time) (ASTM C 191)												

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.

IMPORTANT CONSIDERATIONS

SikaGrout®-220 is not for usage in sea water. 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, this 'non-shrink' property will be effective only if the material is not subjected to water loss.

This is confirmed by a note in the ASTM C 1107 Standard Specification for packaged dry, hydraulic cement grout (non-shrinkable), which clarifies the behaviour of the non-shrink grout when subjected to some drying:

"Note 1: Since all conditions of use cannot be anticipated, this specification requires non-shrink grout to exhibit no shrinkage when tested in a laboratory-controlled moist-cured environment, and requires only the reporting of the observed height change, usually shrinkage, when test specimens are subject to some degree of drying".

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The substrate should be prepared by suitable mechanical preparation techniques such as high pressure water, breakers, grit blasting, scabblers, etc.

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®-220.

Concrete, mortar and stone

Surfaces must be sound, clean, and free from frost, oils, grease, standing water and all loosely adhering particles and other surface contaminants.

Metal surfaces (iron and steel)

Surfaces should be clean, free from scale, rust, oil and grease.

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®-220 into it while continuously mixing. Add the remaining water until the desired consistency is obtained.

Mix for 2–3 minutes with a slow speed drill (500 rpm max.)

APPLICATION

The formwork shall be constructed to be leak proof.

This can be achieved by using foam rubber strips or mastic sealant beneath the constructed formwork and between joints.

After mixing, stir lightly with a spatula for a few seconds to release any entrapped air. Pour the mortar within 10–15 minutes after mixing.

When carrying out baseplate grouting, ensure sufficient pressure head is maintained to keep mortar flowing. Exposed parts of the mortar surface should be kept as small as possible.

Any bolt pockets must be grouted prior to grouting

between the substrate and the base plate. Pouring should be from one side of the void to eliminate any air or pre-soaking water becoming trapped under the baseplate. It is advisable to pour the grout across the shortest distance of travel. The grout head must be maintained at all times so that a continuous grout front is achieved.

Grouting large volumes

For sections thicker than 100 mm, it is necessary to fill the SikaGrout®-220 with graded 10 mm silt free aggregate to minimise temperature rise. The quantity of aggregate should not exceed 1 part aggregate to 1 part SikaGrout®-220 by weight. Mixing ratio will be determined by consistency required and moisture content of aggregates used. A preliminary trial is recommended.

CURING TREATMENT

On completion of the grouting operation, exposed areas should be thoroughly cured. This should be done by the use of Antisol®-E curing compound, continuous application of water and/or wet Hessian.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened or cured material 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.

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