BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-300 Cable ZA

High-performance, zero-bleed, sand-free, cementitious grout for post-tensioned structures

DESCRIPTION

SikaGrout®-300 Cable ZA is a non-shrink, cementitious grout, with a unique 2-stage shrinkage compensating mechanism. It is non-metallic and contains no chlorides. With a special blend of shrinkage-reducing and plasticizing/ water-reducing agents, SikaGrout®-300 Cable ZA compensates for shrinkage in both the plastic and hardened states.

USES

SikaGrout®-300 Cable ZA may only be used by experienced professionals.
SikaGrout®-300 Cable ZA is used:

- For horizontal and vertical grouting of ducts within bonded, post-tensioned structures
- To grout, fill or repair voids within ducts of post-tensioning strands for corrosion protection
- For grouting with tight clearance requirements

CHARACTERISTICS / ADVANTAGES

- Sand-free, allowing for filling and repairing of voids within ducts of post-tensioned structures
- Contains no aluminium powder or any components which generate hydrogen gas, carbon dioxide or oxygen
- Silica fume enhanced for low permeability
- Easy to use, just add clean potable water
- Non-metallic, will not stain or rust
- Zero bleeding, even at high fluidity
- Low heat build-up
- Excellent for pumping. Does not segregate even at high fluidity levels and no build-up on equipment or hoppers
- Non-corrosive, contains no chlorides
- Superior freeze/thaw resistance

APPROVALS / STANDARDS

Test Report 23297EM-A, INTEMAC Laboratory Spain

PRODUCT INFORMATION

Packaging	25 kg bag
Appearance / Colour	Grey powder
Shelf Life	6 months from date of production
Storage Conditions	Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to packaging.
Maximum Grain Size	< 0.1 mm (sand free)
Bulk Density	~1,2 kg/l

TECHNICAL INFORMATION

Compressive Strength	1 day	~15 MPa	(EN 12190)
	Results obtained with a water/powder ratio of 32% at +21 °C		
	3 days	≥ 30 MPa	(EN 445)
	7 days	≥ 45 MPa	
	28 days	≥ 70 MPa	
	Results obtained with a water/powder ratio of 32% at +20 °C		
Tensile Strength in Flexure	3 days	≥ 8 MPa	(EN 445)
	7 days	≥ 9.5 MPa	
	28 days	≥ 10 MPa	
	Results obtained with a water/powder ratio of 32% at +20 °C		
Shrinkage	Autogenous shrinkage: -0.85 mm/m after 28 d		
Expansion	≤ 1% after 3 hours		(EN 445)
Service Temperature	-30 °C to + 80 °C		
Bleeding	Dimensional variation after 24 h	1.3 %	(EN 445)
	Exudation on upper surface (mm/m)	Not observed	
	Segregation in longitudinal half section	Not observed	
	* section 4.5 but without insertion of the wick Results obtained with a water/powder ratio of 32 % at +20°C		

APPLICATION INFORMATION

Mixing Ratio	7.5 l to 8.0 l (30 % - 32 %) of water per 25 kg bag		
Yield	One 25 kg-bag yields approximately 16.5 litres of mortar.		
Ambient Air Temperature	+5 °C to +35 °C		
Substrate Temperature	+5 °C to +35 °C		
Pot Life	~85 minutes (at +20 °C)		
Flowability	Time after mixing	Flow time	(EN 445)
	0 minutes	24.5 seconds	
	15 minutes	27.5 seconds	
	30 minutes	34 seconds	
	45 minutes	40 seconds	
	Tested with 1 litre of grout with a water/powder ratio of 32% at +20 °C		
Initial Set Time	~13 hours (at +21 °C)		
Final Set Time	~16 hours (at +21 °C)	(EN 13294-1)	
Fresh mortar density	~2.0 kg/l (Air content ≤ 1,5%)		

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.

USES

SikaGrout®-300 Cable ZA may only be used by experienced professionals.

LIMITATIONS

- Do not use as a patching or overlay mortar or in unconfined areas.
- Material must be placed within the pot life of the mixed mortar
- As with all cement-based materials, avoid contact with aluminium to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminium bars, rails, post, etc. with an appropiate epoxy coating.
- Minimum ambient and substrate temperature +5 °C and rising at time of application.
- Maximum ambient and substrate temperature +35 °C and falling at time of application.

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.

APPLICATION INSTRUCTIONS

NOTES ON INSTALLATION

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

SUBSTRATE PREPARATION

Cable duct grouting
Ensure that ducts, openings, voids, inlets and outlets are clean and free of debris, fuel, oils, other contaminants and site debris at all times.
Other grouting applications
Remove all dirt, oil, grease, or any contaminants or conditions that may affect adhesion or overall product performances. Anchor bolts to be grouted must be degreased with suitable solvent which will not inhibit grout bonding. Concrete must be sound and roughened to promote mechanical adhesion. Prior to placning, surface should be brought to a saturated, surface-dry (SDD) condition. Ensure forms and ducts will retain grout without leakage.

MIXING

For best results use a colloidal mixer.
Mix for approximately three minutes after the addition of hte last bag or until a homogeneouse mix is achieved. Continue to agitate material in the holding hopper to achieve optimum flow. The method of mixing may significantly affect the material properties, particularly flow. At higher temperatures, and/or with higher water amounts, the grout will behave less thixotropically. Therefore, it may be more appropriate to measure the flow using the standard flow cone test (ASTM C939). Specific on-site testing by the engineer is recommended to ensure that the mixing and placement methods result in the specified requirements.
Start by using 7.5 L of clean potable water per 25 kg bag of material. Add bag of material to the mixing vessel and mix for at least 3 to 4 minutes until a homogenous, fluid mortar results. Add more water if necessary but do not exceed the maximum water amount of 8.0 L per 25 kg bag.

APPLICATION

Make sure all forming, mixing, placing, and clean-up materials are on hand. The method of pumping the grout must ensure complete filling of the ducts and complete surroundings of the cable strands or bar. A mock-up should be completed on-site and inspected by the engineer to ensure that the placement meets specified requirements.
When grouting ducts or other critical elements, it is highly recommended that experienced, trained technicians complete the work.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use.
Hardened/ 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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