

PRODUCT DATA SHEET

SikaGrout[®]-300 PT AU

HIGH PERFORMANCE, ZERO BLEED, SAND FREE, CEMENTITIOUS GROUT FOR POST-TENSIONING APPLICATIONS

AVAILABLE
ON INDENT
ORDER
ONLY

DESCRIPTION

SikaGrout[®]-300 PT AU is a non-shrink (Class A and C), cementitious grout with a unique 2 phase 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 PT AU compensates for shrinkage in both the plastic and hardened states.

USES

SikaGrout[®]-300 PT AU may only be used by suitably experienced and trained specialist contractors.

SikaGrout[®]-300 PT AU is used:

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

CHARACTERISTICS / ADVANTAGES

- Sand free allows filling and repairing of voids within ducts of post-tensioned structures
- Does not contain aluminium powder or any components which generate hydrogen gas, carbon dioxide or oxygen
- Silica fume enhanced for low permeability
- For additional protection, substitute 74 ml of mixing water with 74 ml of Sika[®] Ferrogard[®]-901 for each 20 kg bag of SikaGrout[®]-300 PT AU
- Easy to use, just add water
- Non metallic, will not stain or rust
- Zero bleeding, even at high flow
- Low heat build-up
- Excellent for pumping. Does not segregate even at high flow and no build-up on equipment or hoppers
- Non-corrosive, does not contain chlorides
- Superior freeze/ thaw resistance

APPROVALS / STANDARDS

- RMS B113- Post Tensioning of Concrete
- RMS R56 Ground Anchors
- RMS R64 Soil Nailing
- Dept Transport Qld (TMR)- Product Index for bridges and other Structures Section 5. Registered and Conformng Products Part 5.30 Post Tensioning Grout

PRODUCT INFORMATION

Chemical Base	Portland cement
Packaging	20 kg bags
Shelf Life	9 months from date of production
Storage Conditions	Store properly in dry conditions in undamaged and unopened original sealed packaging
Density	~ 2.0 kg/litre

Maximum Grain Size	None (sand free)	
Soluble Chloride Ion Content	< 0.08% by weight of cementitious material	(ASTM C 1152)

TECHNICAL INFORMATION

Compressive Strength	Day	W/P: 0.33 @ 23°C	W/P: 0.27 @ 23°C	(RMS T375)
	1	~ 15 MPa	~ 30 MPa	(AS 1012.1)
	7	~ 55 MPa	~ 70 MPa	
	28	~ 65 MPa	~ 90 MPa	
Shrinkage	Day	W/P: 0.33 @ 23°C	W/P: 0.27 @ 23°C	(ASTM C 1090-01)
	1	0 - 0.1%	0 - 0.1%	
	7	0 - 0.1%	0 - 0.1%	
	28	0 - 0.2%	0 - 0.2%	
Expansion	< 2% after 3 hours			(ASTM C 940)
Bleeding	<0.5%			(ASTM C 940)
Electrical Resistivity	< 10,000 Ω.cm after 28 days			(FM5-578)

APPLICATION INFORMATION

Mixing Ratio	5.4 litres of water per 20kg bag 6.6 litres of water per 20kg bag for RMS B113, R56 & R64 compliant grout			
Yield	1 bag yields approx. 12.4 - 13.6 litres of grout depending on water addition			
Flowability	W/P ratio	Initial Flow (sec)	Flow Retention @ 45 mins (sec)	(ASTM C 939)
	0.27	15 - 25	30 - 40	
	0.33	< 20	< 3 change	
Ambient Air Temperature	+5 °C min / +35 °C max			
Substrate Temperature	+5 °C min / +35 °C max			
Pot Life	~ 60 minutes			

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

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, and other bond-inhibiting materials by mechanical means. Anchor bolts to be grouted must be de-greased with suitable solvent which will not inhibit grout bonding. Concrete must be sound and roughened to promote mechanical adhesion. Prior to placing, 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. Alternatively, mechanically mix with a high speed drill (2500 rpm) and Sika® jiffy paddle. Mix for approximately 3 minutes after the addition of the last bag or until a homogeneous mix is achieved. Continue to agitate ma-

terial in the holding hopper to achieve optimum flow. Do not mix by hand!

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 C -939). The expected flux time is between 11 - 30 seconds under normal conditions. Specific on site testing by the engineer is recommended to ensure that the mixing and placement methods result in the specified requirements.

Add appropriate quantity of clean water. Add bag of material to mixing vessel. Start by using 5.4 litres of water per 20 kg bag of material. Add additional water as needed - a total maximum of 6.6 litres per 20 kg bag in order to achieve the flow specified. Ambient and material temperature should be as close as possible to +23 °C. If higher, use cold water, if colder, use warm water.

APPLICATION

Make sure all forming, mixing, placing, and clean-up materials are on hand. The grout should be used within 60 minutes from the start of mixing. The method of pumping the grout must ensure complete filling of the ducts and complete surrounding of the strands or bar. A mock-up should be completed onsite and inspected by the engineer to ensure that the placement means and methods yield the specified results. When grouting ducts or other critical elements, it is highly recommended that experienced, trained technicians complete the work.

CLEANING OF TOOLS

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

LIMITATIONS

- Minimum application thickness: 3 mm
- Maximum application thickness (neat): comply with PTI (Post-tensioning Institute) specification for grouting of post-tensioned structures
- Do not use as a patching or overlay mortar or in unconfined areas
- Material must be placed within 60 minutes of mixing
- 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 appropriate epoxy coating.
- Minimum ambient and substrate temperature +5 °C and rising at time of application. For lower temperature, refer to the Post-Tensioning Institute (PTI) Guide Specification for Grouting of Post-Tensioned Structures.
- Maximum ambient and substrate temperature is 35°C at the time of placement. For higher temperatures, refer to the PTI Guide Specification for Grouting of Post-Tensioned Structures.

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 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.

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. 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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