BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-400 PT Cable

HIGH PERFORMANCE, BLEED FREE, SAND FREE, CEMENTITIOUS GROUT FOR POST-TENSIONED STRUCTURE

DESCRIPTION

SikaGrout®-400 PT Cable is a non-shrink, cementitious grout with a unique shrinkage compensating mechanism. It is non-metallic and contains no chlorides. With a special blend of shrinkage-reducing and plasticizing / water-reducing agents, SikaGrout®-400 PT Cable is a shrinkage compensated material.
SikaGrout®-400 PT Cable is a high-performance, cement based grout specifically engineered for critical applications, most notably in post-tensioned concrete structures.

USES

SikaGrout®-400 PT Cable is used for:
- Grouting of Post-Tensioned Cable Ducts
- Grouting of Ground Anchor Bolts
- Rock Anchoring
- Grouting Behind Tunnel Linings and Shafts
- Coupler Grouting for precast project
- Filling Fine Fissures and Voids in Concrete
- Grouting in Confined Spaces with Tight Clearances

CHARACTERISTICS / ADVANTAGES

- Pre-packaged in accordance with ISO 9001 which ensures consistency of the manufactured material
- Easy to use, just add water and mix
- Low heat build-up
- High flow characteristics
- Bleed Free, even at high flow
- Excellent Flowability & Pumpability
- Does not segregate even at high flow
- No build-up on equipment or hoppers
- Non-corrosivem does not contain chlorides
- Silica fume enhanced for low permeability

PRODUCT INFORMATION

Chemical base	Ordinary Portland Cement	
Packaging	25 kg bag	
Appearance / Colour	Powder / Grey	
Shelf life	6 months from the date of production if stored in undamaged and unopened original sealed bags	
Storage conditions	Stored in a cool dry placed between +5° C and +35° C	
Density	Mixed density: 2.05 kg/L	(FIB 20, Appendix B)
Bulk density	~0.84 kg/L	(FIB 20, Appendix B)

TECHNICAL INFORMATION

Indicative performance of mortar mix	SikaGrout®-400 PT Cable, when mixed and tested in accordance with EN 445, complies with the requirements of EN 447.	
Compressive strength	Day / Value: 3 days / ≥ 30 N/mm²; 7 days / ≥ 55 N/mm²; 28 days / ≥ 70 N/mm² Values measured at water : powder = 0.3, cube size 70.6 mm, curing temperature +30°C	(ASTM C-109)
Expansion	Up to +2%	
Change of volume	~+0.42%	(EN 445)
Bleeding	No bleeding at 24 hours	(FIB 20, Appendix B)

APPLICATION INFORMATION

Mixing ratio	Water : Powder ratio = 0.28 ~ 0.32 (i.e. 7~8 liters of water per 25 kg bag)	
Yield	~16 L per 25 kg bag at W/P 0.30	
Product temperature	< 30 °C, max	
Ambient air temperature	+5° C min. (temperatures must be rising at the time of application) +35° C max. (at the time of application)	
Relative air humidity	>60%	
Pot life	~60 min	
Flowability	Fluidity / Value: Initial (0 minute) / 21 Second; After 30 Minutes / 22 Second	(FIB 20, Appendix B)
Setting time	~6—15 Hours at +30° C	
Initial set time	> 360 Minutes	(ASTM C 953)
Final set time	< 900 Minutes	(ASTM C 953)

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

- 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.

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

Cable Duct Grouting:
Ensure that ducts, opening, inlets and outlets are clean, free of dirt and debris, fuel, oils and any other contaminants at all times.
Other grouting application:
Remove all dirt, oil, grease, and other bond-inhibiting materials by mechanical means. Anchor bolts to be grouted must be degreased with a suitable solvent cleaning agent. Concrete must be sound and roughened to promote mechanical adhesion. Prior to pouring the concrete, surfaces should be in a saturated surface dry condition.

MIXING

For best results use a colloidal mixer. Alternatively, mechanically mix with a high speed drill (2500 rpm) and jiffy paddle. Mix for approximately 3 minutes after the addition of the last bag or until a homogeneous 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 C-939).
Specific on site testing by the engineer is recommended to ensure that the mixing and placement methods result in the specified requirments.
Add appropriate quantity of clean water. Add bag of material to mixing vessel.

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 on on-site and inspected by the engineer to ensure that the placement means and methods yield the specified results.

When grouting ducts or other critical element, 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.

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.

Sika India Pvt. Ltd.
620, Diamond Harbour Road
Commercial Complex II
Kolkata - 700 034
West Bengal, India

Contact:
Phone: +91 33 2447 2448
Fax: +91 33 2397 8688
info.india@in.sika.com
www.sika.in