BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-340 HP

Cementitious high strength engineering grout

DESCRIPTION

SikaGrout®-340 HP is cementitious, 1- part, ready to mix, shrinkage compensated, low shrinkage, high performance, free flowing, pumpable engineering grout. Suitable for machine bases, bedding joints, void filling and anchoring. Thickness: 10 – 300 mm.

USES

- Heavy equipment/ machine bases
- Base plates
- Bedding joints in pre-cast concrete sections
- Filling voids, cavities, gaps and recesses
- Sealing around penetrations
- Post fixings
- Suitable for installing reinforcement with an anchoring product in accordance with EN 1504-6
- Suitable for structural and non-structural repairs of concrete in buildings and civil engineering works in accordance with EN 1504-3

FEATURES

- High performance
- Fast early strength development
- High final strength
- Adjustable consistency
- Shrinkage compensated
- Fluid consistency
- No segregation or bleeding
- Easy to use and mix
- Can be pumped long distances

CERTIFICATES AND TEST REPORTS

- CE Marking and Declaration of Performance according to EN 1504-6 - Anchoring of reinforcing steel bar
- CE Marking and Declaration of Performance according to EN 1504-3 - Structural and non-structural repair product for concrete for use in buildings and civil engineering works

PRODUCT INFORMATION

Composition	Special cement, selected aggregates and additives
Packaging	25 kg bag
Appearance and 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 +30 °C. Always refer to packaging.
Maximum grain size	D_{max}: ~2.5 mm

TECHNICAL INFORMATION

Compressive strength	**1 day** ≥50 MPa; **7 days** ≥80 MPa; **28 days** ≥95 MPa At +20 °C with a water mixing ratio of 12 %.	(EN 196-1)
Modulus of elasticity in compression	~35 GPa	(EN 13412)
Flexural-strength	**1 day** ≥8 MPa; **28 days** ≥15 MPa At +20 °C with a water mixing ratio of 12 %.	(EN 196-1)
Pull-out resistance	≤0.6 mm at load of 75 KN	(EN 1881)
Restrained shrinkage / expansion	≥2.0 Mpa	(EN 12617-4)
Tensile adhesion strength	≥2.0 MPa	(EN 1542)
Reaction to fire	Class A1	
Capillary absorption	≤0.5 kg m^{-2} $h^{-0.5}$	(EN 13057)
Chloride content	≤0.05 %	(EN 1015-17)

APPLICATION INFORMATION

Mixing ratio	2.8 – 3.25 litres water per 25 kg bag
Yield	25 kg of powder yields approximately 12,1 litres of mortar
Layer thickness	Min. 10 mm / Max. 300 mm
Ambient air temperature	Min. +5 °C / Max. +35 °C
Substrate temperature	Min. +5 °C / Max. +35 °C
Pot Life	~90 minutes at +20 °C
Fresh mortar density	~2.3 kg/lt (EN1015-6)

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.

FURTHER DOCUMENTATION

For base plating works, refer to the Sika Method of Statement for "Cementitious Grouting of Machine Bases and Base Plates" (Ref. 8502101) for more information regarding application, substrate and form work preparation, pouring techniques, e.t.c.
For concrete repair works, refer to the Sika Method of Statement for "Restoring Concrete Structures by Recasting Using Sika® Ready to use Mortars" (Ref. 8503202) for more information regarding repair system application, substrate preparation and/or refer to the recommendations provided in EN 1504-10.

IMPORTANT CONSIDERATIONS

- Not to be used for open repair works or overlay in unconfined spaces
- Keep exposed surfaces to a minimum
- Avoid application in direct sun and/or strong wind
- Use only on clean, sound substrate
- The substrate must be free of ice
- Do not exceed water addition
- Do not use vibrating pokers
- Do not use continuous mixing equipment
- Pour or pump from one side only. Do not add additional water during the surface finishing, as this will cause discoloration and cracking
- To avoid cracking in warm temperatures, keep bags cool & use cold water for mixing
- Avoid exposure during rainfall and prior to final set

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

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete
The concrete must be structurally sound, thoroughly clean, free from oil, grease, dust, loose material, surface contamination and materials which will impair the grout flow or reduce adhesion strength. Laitance, delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete must be removed by suitable mechanical preparation as directed by the engineer or supervising officer. Any pockets or holes for structural fixings must also be cleaned of all debris.

Shutter Formwork
Where formwork is to be used, all formwork must be of adequate strength, treated with release agent and sealed to prevent leakage of pre-wetting water and grout. Ensure formwork includes outlets for removal of the pre-soaking water. As a guide, leave a gap of approximately 15 cm on one side and 5 cm on the opposite side. A header box or hopper should be constructed on one side of the formwork so that a grout head of 150 – 200 mm can be maintained during the grouting operation.

MIXING

Drill and Spiral Mixer
Pour the correct amount of water into a suitable clean mixing container. While stirring slowly with drill and spiral mixer (200 – 500 rpm), add the complete bag of powder into the water. Mix continuously for 3 minutes to achieve a uniform and lump free smooth consistency. Do not add more water than the maximum specified.

Grout mixer
SikaGrout®-340 HP must be mixed using suitable grout mixing equipment combined with agitator for continuous large volume mixing. Volume capacity of equipment must be applicable to the volume of material being mixed for a continuous operation. Equipment trials must be considered to ensure product can be mixed satisfactory. Pour the minimum water ratio in the correct proportion into the grout mixer. While stirring the water, slowly add the powder to the water. Add more water within the mixing time up to the maximum allowed until the desired consistency is achieved. Mix continuously for a minimum of 3 minutes. For larger mixes, the mixing time must be extended to approximately 5 minutes or as necessary until the grout achieves a lump free smooth consistency. Do not add more water than the maximum specified.
Note: Do not use continuous mixing equipment.

APPLICATION

Reference must be made to further documentation, where applicable, such as relevant method statement, application manual and installation or working instructions.

Pre-wetting
The prepared concrete substrate must be thoroughly saturated with clean water for a recommended 12 hours before application of the grout. The surface must not be allowed to dry within this time. Prior to application of the grout, all water must be removed from within formwork, cavities or pockets and the final surface must achieve a dark matt appearance (saturated surface dry) without glistening.

Placing
Apply the material shortly after mixing to take advantage of the expansion properties. Immediately after mixing, pour or pump the mixed grout into the header box or hopper, ensuring continuous grout flow during the complete grouting operation to avoid trapping air. For large volume placement, grout pumps are recommended. Equipment trials must be considered to ensure product can be pumped satisfactory.

Surface finishing
Finish exposed grout surfaces to the required surface texture as soon as the grout has started to stiffen. Do not add additional water on the surface. Do not over work surface as this may cause surface discoloration and cracking. After the grout has initially hardened, remove formwork and trim edges while concrete is ‘green’.

Cold weather working
Consider using warm water to assist with achieving strength gain and maintaining physical properties.

CURING TREATMENT

Protect the fresh material from premature drying and cracking using an appropriate curing method e.g. curing compound, moist geo-textile membrane, hessian, polythene sheet etc. In cold weather, apply insulated blankets to maintain a constant temperature to prevent surface damage from freezing and frost.

CLEANING OF EQUIPMENT

Removal of fresh remnants from tools and application equipment can be carried out using water immediately after use. Hardened 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.

Sika Hellas ABEE
15, Protomagias Str.
GR 145 68, Kryoneri, Attica
Tel.: +30 210 81 60 600
E-mail: info@gr.sika.com
www.sika.gr