

PRODUCT DATA SHEET

SikaGrout®-3200

FATIGUE CERTIFIED ONSHORE WIND TOWER PRECISION GROUT

DESCRIPTION

SikaGrout®-3200 is a fast hardening, high early strength, high final strength, 1-component, shrinkage compensated, free flowing cementitious grout for structural filling of joints and under grouting base plates.

USES

High performance precision grouting of vertical or horizontal joints for onshore steel and pre-cast concrete wind towers.

CHARACTERISTICS / ADVANTAGES

- Fast early strength development
- High final strength
- Fluid consistency
- Can be pumped
- Expansion compensated
- Application thickness from 10 to 150 mm
- High adhesion to concrete

APPROVALS / STANDARDS

- CE Mark according to EN 1504-6: 2006: Anchoring of a reinforcing bar
- Fatigue certified
- Fulfills the requirements of the DAfStb Guideline: "Production and use of cement-bound grouting concrete and grouting mortar"; test report n° 164952 issued by MPA Hannover

PRODUCT INFORMATION

Chemical base	Special cement, selected aggregates and additives
Packaging	30 kg valve bags and large bags upon request
Appearance / Colour	Grey powder
Shelf life	6 months from date of production if stored properly
Storage conditions	Store properly in undamaged original sealed packaging, in dry cool conditions.
Maximum Grain Size	D _{max} : ~3 mm

TECHNICAL INFORMATION

Compressive Strength	1 day	2 days	7 days	28 days	(EN 12190)
	~ 60 MPa	~ 70 MPa	~ 80 MPa	~ 90 MPa	
	Equivalent to C80 concrete (150 x 300 cylinders)				(EN 206-1)
Modulus of Elasticity in Compression	~ 38 GPa				(EN 13412)

Tensile Strength in Flexure	1 day ~ 5 MPa	28 days ~ 10 MPa	(EN 12190)
Tensile Adhesion Strength	> 2.0 MPa		(EN 1542)
Expansion	> 0.1 % after 24 hours Max 2 %		

APPLICATION INFORMATION

Mixing ratio	11 % to 12.5 % 3.3 to 3.75 L of water for 30 kg powder
Fresh Mortar Density	~ 2.3 kg/l
Yield	30 kg of powder yields approximately 14.5 litres of mortar
Layer Thickness	10 mm min. / 150 mm max.
Ambient Air Temperature	+5 °C min. / +35 °C max.
Substrate Temperature	+5 °C min. / +35 °C max.
Pot Life	~ 60 minutes at 20 °C

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Concrete:

The concrete shall be thoroughly clean, free from dust, loose material, surface contamination and materials which will impair the grout flow or reduce adhesion strength. Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable means as directed by the Engineer or Supervising Officer.

MIXING

SikaGrout®-3200 shall be professionally mixed using suitable mixing equipment applicable to the volume of material being mixed.

Pour the minimum water ratio in the correct proportion into a suitable mixing container. While stirring slowly, add the powder to the water. Add more water within the mixing time up the maximum allowed until the desired consistency is achieved and to suit ambient temperature conditions. Do not add more water than the maximum specified. Mix thoroughly for minimum 3 minutes. For larger mixes the mixing time shall be extended to approximately 5 minutes or as necessary until the mortar is homogeneously mixed with no lumps and no remaining dry powder.

APPLICATION

Pre-Wetting

The concrete substrate shall be thoroughly saturated with clean water a recommended 12 hours before application of the grout. The surface shall not be allowed to dry in this time. Prior to application of the grout, excess water shall be removed and the surface shall achieve a dark matt appearance (saturated surface dry) without glistening and surface pores and pits shall not contain water.

SikaGrout®-3200 is applied manually using traditional

pouring techniques or for large applications using suitable pumping device (refer to Sika Technical Service for advice). It is recommended to check the material after pumping.

Apply the material shortly after mixing to take advantage of the expansion properties.

Ensure formwork is strong enough to hold the fresh mortar and sealed to prevent leakage.

Cure exposed surfaces immediately with protective sheet or membrane. Shield the fresh mortar from direct sun, wind and frost. Finish exposed surface as desired as soon as the mortar has started to stiffen. Do not add additional water on surface. Do not over work surface as this may cause surface cracking.

CURING TREATMENT

Protect the fresh mortar from early dehydration using the relevant curing method.

CLEANING OF TOOLS

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

IMPORTANT CONSIDERATION

- Take precautions to protect application from direct sun and/or strong wind
- Do not add water under or over recommended dosage
- Apply only to sound, clean prepared concrete substrate

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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

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.

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Product Data Sheet
SikaGrout®-3200
October 2017, Version 01.01
0202010100100000195

SikaGrout-3200-en-VN-(10-2017)-1-1.pdf