

PRODUCT DATA SHEET

SikaGrout[®]-295 ZA

Fatigue tested, ultra-high strength cementitious grout

DESCRIPTION

SikaGrout[®]-295 ZA is a one component, ultra-high strength, cement based grout, with high mechanical strengths, specifically designed and fatigue tested for use in the renewable energy field, under metal bases and concrete structures.

USES

SikaGrout[®]-295 ZA may be used in areas where high mechanical strengths are required, such as :

- Under Wind turbine bases
- Under bearing plates
- Between precast concrete segments
- Anchors in bases, concrete posts and precast construction columns.
- Cracks, gaps and large voids.

PRODUCT INFORMATION

Chemical Base	Cement, selected fillers, aggregates and special additives
Packaging	25kg bags
Shelf Life	12 months from date of production
Storage Conditions	Store properly in dry conditions, in undamaged, original unopened bags
Appearance / Colour	Grey powder
Maximum Grain Size	Dmax: ~3 mm

CHARACTERISTICS / ADVANTAGES

- Easy mixing and placing
- Rapid strength development
- Fatigue tested
- Good flow properties
- Pumpable
- Free from chlorides and metallic particles
- Protects metallic parts against corrosion, due to its high pH level.
- Expansive properties
- Very high mechanical strengths.
- Not corrosive or toxic

APPROVALS / STANDARDS

Fatigue tested according to fib Model code 2010

Density ~ 2.3 kg/l (density of fresh mortar)

TECHNICAL INFORMATION

Compressive Strength	Ambient temperature +20°C (water curing) (40 x 40 x 160mm prisms)				(EN 12190)
	24 hours	48 hours	7 days	28 days	
	~ 35 N/mm ²	~ 50 N/mm ²	~ 80 N/mm ²	~ 95 N/mm ²	
Modulus of Elasticity in Compression	~30GPa				
Tensile Strength in Flexure	Ambient temperature: +20°C (water curing)			(EN12190)	
	1 day	7 days	28 days		
	~ 6.0 N/mm ²	~ 8.0 N/mm ²	~ 10.0 N/mm ²		
Tensile Strength	Ambient temperature: +25°C (Splitting tensile)			(EN12190)	
	1 day	7 days	28 days		
	~ 2.6 N/mm ²	~ 3.8 N/mm ²	~ 4.8 N/mm ²		

APPLICATION INFORMATION

Consumption	For 1 mm thickness per m ² ~ 2.05 kg of powder	
Yield	~12.0 ltr per 25kg bag	
Layer Thickness	10 mm min. / 150 mm max	
Ambient Air Temperature	+5° C min / +35° C max.	
Mixing Ratio	11.5 -12.0% or 2.87 - 3.0 litres per 25 kg bag / 57.5 - 60 litres per 500 kg	
Substrate Temperature	+5° C min / +35° C max.	
Pot Life	Conditions	Time
	+20°C / 50% r.h.	90 minutes
Temperature will affect the pot life. Application at temperatures above +23°C will reduce the pot life and the working time. Temperatures below +23°C will increase the pot life and extend the working time.		

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.

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

The concrete shall be thoroughly clean, free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting by the grout. Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable means. It is recommended the concrete surface shall be continuously saturated with clean water for at least 2 hours before grouting.

MIXING

SikaGrout®-295 ZA can be mixed with a low speed (<500rpm) hand drill mixer to avoid entraining too much air. Mix only full bags for best results. Pour the minimum recommended water in a suitable mixing container. While stirring slowly, add the powder to the water and mix thoroughly at least for 3 minutes adding additional water if necessary to the maximum specified amount to adjust the grout to the required consistency

APPLICATION

SikaGrout®-295 ZA is applied manually using traditional pouring techniques or for large applications using suitable pumping device. (refer to Sika technical department for advice). It is recommended to check the material after pumping.

Remove excess water from substrate surface e.g. with clean sponge, until surface is dark matt in appearance without glistening (saturated surface dry) . Surface pores and pits shall not contain water. Let the grout stand for ~5 minutes to release air entrained by mixing. Pour grout into the prepared openings using a sufficient pressure head to maintain a continuous flow of grout. Ensure air displaced by the mortar can easily escape. For optimum use of the expansion properties apply the grout within ~10 minutes after mixing. 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

Keep visible exposed grout surfaces to a minimum. Protect the fresh material from premature drying using appropriate curing method e.g. curing compound, moist textile membrane, polythene sheet etc.

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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