

PRODUCT DATA SHEET

SikaGrout[®]-580

Sulphate-resistant grout with slow strength development and with reduced CO₂ footprint

DESCRIPTION

Sulphate-resistant, cementitious, 1-component, shrinkage-compensated grout with special raw materials to reduce CO₂ emissions.

USES

- Grouting for applications in accordance with ZTV-ING, sections 3 and 6
- Grouting for applications in accordance with the DAfStb Instandsetzungsrichtlinie
- Certified in accordance with DIN EN 1504-3 and DIN EN 1504-6
- Grouting of large volumes possible due to low hydration heat
- Column and machine casting
- Grouting concrete for applications in wastewater structures

Permissible exposure classes:
X0 / XC1-4 / XD1-3 / XS1-3 / XF1-4 / XA1-3

FEATURES

- Slow strength development
- Low hydration heat development
- High sulphate resistance according to DIN 19573
- Very good flow characteristics
- Very low shrinkage (SKVB 0)
- High thickness up to 320 mm possible
- High adhesive tensile strength on concrete substrates
- Very high frost/de-icing salt resistance (CDF method)
- Very low water penetration depth

CERTIFICATES AND TEST REPORTS

- Meets the requirements of the DAfStb guideline "Herstellung und Verwendung von zementgebundenem Vergussbeton und Vergussmörtel"
- CE marking in accordance with DIN EN 1504-3 and DIN EN 1504-6
- Fire reaction class A1 according to DIN EN 13501-1 (non-combustible)

PRODUCT INFORMATION

Composition	Cement, substitute binders, selected aggregates and additives
Packaging	25 kg bag
Appearance and colour	Grey Powder
Shelf life	In unopened original packaging 12 months from production date
Storage conditions	Store in undamaged and unopened original packaging under dry conditions at temperatures between +5 °C and +30 °C.
Maximum grain size	8 mm

TECHNICAL INFORMATION

Compressive strength	Compressive strength class C50/60 ≥20 N/mm ² after 24 hours (Early strength class C)	(DIN EN 206-1 / DIN 1045-2) (DAfStb-VeBMR)
Modulus of elasticity in compression	> 30.000 N/mm ²	(DIN EN 13412)
Shrinkage	Shrinkage class SKVB 0 (<0,6 ‰)	(DAfStb-VeBMR)
Expansion	> 0,1 Vol.-% after 24 hours	(DAfStb-VeBMR)

APPLICATION INFORMATION

Mixing ratio	2,5 - 2,625 litre of water per 25 kg bag (+5°C to +30 °C) 10 - 10,5 % water per 25 kg bag (+5°C to +30 °C)	
Consumption	~ 2.3 kg/ltr	
Layer thickness	30 - 320 mm	(DAfStb-VeBMR)
Material temperature	min. +5 °C / max. +30 °C	
Ambient air temperature	min. +5 °C / max. +30 °C	
Substrate temperature	min. +5 °C / max. +30 °C	
Pot Life	~90 minutes (+20 °C)	
Flowability	Slump test ~ 620 mm (class a2)	(DAfStb-VeBMR)
Fresh mortar density	~ 2.3 kg/ltr	

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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.

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 should also be cleaned of all debris.

Shutter Formwork

Where formwork is to be used, all formwork should 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

Stirrer (400-500 rpm)

Pour the appropriate amount of water into a suitable and clean mixing container. While stirring slowly, first add half the package to the water and mix for approx. 30 seconds. Then add the remaining amount of powder and mix for a further 150 seconds (2 minutes and 30 seconds) until a homogenous and lump-free consistency is achieved. Do not exceed the recommended maximum amount of water. It is then recommended to deaerate the grout for approx. 1 - 2 minutes before pouring. Only mix complete bags.

Compulsory mixer

Pour the appropriate amount of water into a suitable and clean compulsory mixer. While stirring slowly, add the entire package into the water and mix for at least 3 minutes until a homogeneous and lump-free consistency is achieved. Do not exceed the recommended maximum amount of water. It is then recommended to deaerate the grout for approx. 1 - 2 minutes before pouring. Only mix complete bags.

APPLICATION

SikaGrout®-580 must be poured slowly and continuously from one side in order to avoid air inclusions. Feed pumps are recommended for the use of large quantities. Preliminary tests with the appropriate pumps should be considered to ensure that the product can be pumped sufficiently. Do not add additional water to the surface after pouring. The formwork should not be removed until the concrete has cured. Winter construction should be considered if temperatures fall below +5°C.

CURING TREATMENT

Protect exposed grouted surfaces immediately against early water evaporation (wind, draughts, sunlight, etc.) for a period of 3 to 5 days.

CLEANING OF EQUIPMENT

The mixing and application equipment must be cleaned with water immediately after use. Cured material can only be removed mechanically.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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 Deutschland CH AG & Co KG
Kornwestheimer Straße 103 - 107
D - 70439 Stuttgart
Tel.: +49 711 8009-0
Fax: +49 711 8009-321
info@de.sika.com
www.sika.de

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