BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-9610

Shrinkage-compensated and high-performance cementitious grout with advanced nano-engineered technology for offshore, marine and civil infrastructure applications

DESCRIPTION

SikaGrout®-9610 is a ready-to-use, shrinkage-compensated, homogeneous, flowable, and pumpable high-performance cementitious (HPC) grout for offshore, marine and civil infrastrucres. Incorporating advanced nano-engineered binder technology with a blend of Portland, pozzolan, and special cements, SikaGrout®-9610 achieves superior technical performance and exceptional rheological properties. Anti-washout properties and low water permeability make this grout particularly effective for offshore and marine structure grouting and other demanding applications involving narrow constrictions and complex filling needs.

USES

SikaGrout®-9610 has been especially formulated for large scale, pump applications.

- Grouting of pile-sleeve connections of offshore jacket foundations
- Grouting of bolted monopile/transition piece skirt annuli
- Grouting of mooring and berthing dolphins for marine terminals
- Grouting of piled pier and jetty structures
- General purpose grouting for civil infrastructures

Contact the Technical Department of your local Sika office regarding any application required not mentioned here

CHARACTERISTICS / ADVANTAGES

- Good flowability
- High early strength
- Shrinkage compensated
- No segregation or bleeding to ensure consistent final physical performance
- Wide range of application between 2–40 °C without special precautions
- Volume stable

PRODUCT INFORMATION

Composition	SikaGrout®-9610 has a C_3A content of approximately 3.1–3.4% by mass of dry powder
Packaging	25 kg bag
Shelf Life	12 months from date of production
Storage Conditions	Product must be stored in original, unopened and undamaged sealed packaging in dry conditions away from direct sunlight and heat, not exceeding 40 °C. When stored under high temperature and high humidity conditions, the shelf life may be reduced.
Density	2.27–2.33 ton/m³ (EN 12390-7)
Total Chloride Ion Content	< 0.01 %

TECHNICAL INFORMATION

Compressive Strength

1 day	> 35 N/mm²	(EN 1015-11) 40 × 40 × 160 mm prisms, at 25 °C
3 days	> 55 N/mm²	
7 days	> 60 N/mm²	
28 days	> 80 N/mm²	
91 days	> 85 N/mm²	

Age	At 25 °C	At 30 °C	
1 day	> 35 N/mm²	> 40 N/mm²	(ASTM C109/C109M; EN 12390-3) 50 mm & 75 mm cubes results
3 days	> 55 N/mm²	> 65 N/mm²	
7 days	> 60 N/mm²	> 70 N/mm²	
28 days	> 80 N/mm²	> 85 N/mm²	
91 days	> 85 N/mm²	> 90 N/mm²	

Exposure classes:
X0, XC1-4, XS1-3, XD1-3, XF1, XA1-3

Modulus of Elasticity in Compression	> 30 000 N/mm² (EN 12390-13)
	Poisson's ratio: 0.20 (ASTM C469)
Tensile Strength in Flexure	> 11.0 N/mm² (EN 1015-11)
Tensile Strength	> 6.0 N/mm² (ASTM C307)
Shrinkage	< 0.015 % at 91 days (ASTM C1090/C1090M)
Bleeding	0 % (No bleeding) (ASTM C940)
Chloride Ion Diffusion Resistance	< 2000 (Low penetrability) (ASTM C1202)

APPLICATION INFORMATION

Mixing Ratio	13.8–15.3 % water / powder ratio
Consumption	Approximately 500 liters per ton material
Layer Thickness	25–600 mm
Product Temperature	2 °C min. / +40 °C max.
Ambient Air Temperature	2 °C min. / +40 °C max.
Substrate Temperature	2 °C min. / +40 °C max.
Pot Life	3 hours
Flowability	Flow table 270–330 mm (ASTM C1437)

	Flow channel	> 550	(EN 13395-2)

Setting Time	Initial	Final
	7 hours	9.5 hours

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

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

NOTES ON INSTALLATION

- SikaGrout®-9610 has been especially formulated for use in specific applications. As such SikaGrout®-9610 should be installed by experienced fully trained contractors.
- Sands or other products that could affect the products properties must not be added.

EQUIPMENT

Mixer type	Paddle mixer
Mixing time	Approximately 5 minutes
Application method	One continuous pour

MIXING

SikaGrout®-9610 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 before full project application. Put most of the water required in the mixer and add slowly the grout material.
Mix until a homogeneous mortar (2–3 minutes), add the remaining water and continue mixing for at least another 2 minutes until the required fluid or flowable consistency is obtained. Mix with potable water only. Do not add more water than the maximum specified.

CLEANING OF TOOLS

Tools and spillages can be cleaned with water while SikaGrout®-9610 is still uncured. Once hardened, the material can only be removed mechanically.

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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