BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-928

(formerly MFlow 928)

High strength, non-shrink precision grout for placement by pouring or pumping

DESCRIPTION

SikaGrout®-928 is a one component, cement based, non-shrink, high strength precision grout.
When mixed with water, SikaGrout®-928 forms a mortar with a fluid consistency which can be easily applied by hand or machine for all grouting works. SikaGrout®-928 provides excellent flow properties without segregation or bleeding.

USES

SikaGrout®-928 is typically used for:

- Load-transferring, supporting, force transmitting bond between concrete foundations and machines, steel bed plates, steel rails (crane track rails) and high shelving pillars.
- Precision grouting of machines, turbines, pumps and generators.
- Force-transmitting grouting of prefabricated concrete pillars in hole footings.
- Void-free bond between components and non-reinforced concrete or reinforced concrete.
- Anchoring of bolts and reinforcing bars.

FEATURES

- Non-shrink.
- Easy application.
- Excellent flow properties without bleeding and segregation.
- Can be pumped into intricate areas or areas inaccessible to conventional grouting methods.
- High early and final strengths.
- Excellent adhesion and excellent durability.
- Controlled expansion for perfect adhesion and volume filling.
- Provides a smooth bond free of cracks and cavities, enabling calm machine running and therefore more accurate working and lower wear and tear of machinery.
- Excellent freeze-thaw and de-icing salt resistance.
- Impermeable to water.
- CE-Certified according to EN 1504-6.

PRODUCT INFORMATION

Packaging	SikaGrout®-928 is available in 25 kg paper bags and 1000 kg big bags (on request).
Shelf life	See information given on product packaging.
Storage conditions	Store at ambient temperatures, out of direct sunlight, in cool, dry warehouse conditions and clear of the ground on pallets protected from rainfall prior to application. No permanent storage over +30 °C.
Appearance and colour	Grey colour

TECHNICAL INFORMATION

Compressive strength	1 day	≥ 30 N/mm²	(EN 12190)
	3 days	≥ 50 N/mm²	
	7 days	≥ 60 N/mm²	
	28 days	≥ 65 N/mm²	
	All data determined at +21 °C.		
Modulus of elasticity in compression	≥ 23,000 N/mm²		
Flexural-strength	1 day	≥ 5 N/mm²	(EN 12190)
	3 days	≥ 6 N/mm²	
	7 days	≥ 7 N/mm²	
	28 days	≥ 8 N/mm²	
	All data determined at +21 °C.		
Pull-out resistance	Pull-out strength (Displacement at load of 75 KN)	≤ 0.6 mm	(EN 1881)
Freeze thaw de-icing salt resistance	Freeze – Thaw Scaling (56 cycles)	< 0.10 kg/m² (= classification: "very good")	(SS 137244)

APPLICATION INFORMATION

Fresh mortar density	Approx. 2.2 kg/l
Consumption	Approx. 1,900 kg powder is needed to prepare 1 m³ of fresh mortar. One 25 kg bag will yield 12 to 13 litres of grout depending on the water demand used.
Material temperature	+5 °C to +30 °C
Ambient air temperature	+5 °C to +30 °C
Mixing ratio	Use the water demand given on the product packaging. Do not exceed maximum water amount!
Substrate temperature	+5 °C to +30 °C
Pot Life	Approx. 60 minutes
Waiting time	Removal of formwork after approx. 12 hours (at +20 °C).

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.

IMPORTANT CONSIDERATIONS

- Do not apply at temperatures below +5 °C nor above +30 °C.
- Do not add any other substance that could affect the properties of the product.
- Under no circumstances should SikaGrout®-928 be re-tempered by the later addition of water.
- In case of severe dynamic operating forces and repetitive loading such as founding in steel and aluminium rolling mills, crane rails, heavy presses etc., we recommend our metallic aggregate reinforced grout Sikagrout®-4800.
- In case of thicker applications and complex geometries consult your local Sika representative.

ECOLOGY, HEALTH AND SAFETY

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

APPLICATION INSTRUCTIONS

NOTES ON INSTALLATION

The performance, durability and safety of the installed product used for anchoring steel (rebar), bolts and screws strongly depend on the substrate, the dimensions of the element, the drilling and cleaning of holes, the substrate temperature and the type of anchoring bolt or bar. It is therefore important that a proper structural assessment of the structural elements to be repaired is carried out by qualified engineers, and that the choice of products, anchor types etc. is based upon such assessment

SUBSTRATE PREPARATION

The concrete should be free of frost, curing membranes, waterproofing treatments, oil stains, laitance, friable material and dust.
The concrete surfaces should be chipped and if there is a water leakage it must be drained or properly plugged. Saturate the cleaned foundation and any bolt holes with water for at least 6 hours, preferably 24 hours.
Just before grouting, surfaces should be damp, but free of standing water. Particular attention should be paid to bolt holes to ensure that these are water-free. Use oil free compressed air to blow out bolt holes and pockets as necessary.
Base plates, bolts, etc. must be clean and free of oil, grease and paint etc. Set and align equipment. If shims are to be removed after the grout has set, then lightly grease them for easy removal.
The formwork must fit tightly against the substrate and, when grouting material around machines, it has to be at least 2 cm higher than the bottom of the plate to be underpoured. Ensure formwork is secure and watertight to prevent movement and leaking during the placing and curing of the grout.
The area should be free of excessive vibration. Shut down adjacent machinery until the grout has hardened.
In hot weather, base plates and foundations must be shaded from direct sunlight. Bags of grout should be stored in the shade prior to use.
In cold weather, the temperature of base plates and foundations should be raised to over +5 °C.

MIXING

Use one or more mixers to permit mixing and placing operations to proceed simultaneously without interruption. Stick to the water amounts given on the bag. Mix with clean water only. Put the minimum water amount in the mixer first, then slowly and steadily add the grout. Mix until homogeneous mortar (2-3 minutes), add more water if required and continue to mix for at least 2 more minutes.
Do not exceed the maximum water amount!
Do not retemper grout by adding water or remixing after it stiffens. Do not add cement, sand or other materials to SikaGrout®-928.

APPLICATION

Before grouting, determine if there is excess vibration of the foundation or baseplate caused by nearby operating equipment. Shut down this source of vibration until after the newly-placed grout has taken final set.
Pour mixed SikaGrout®-928 grout into the voids without interruption. The mortar flow can be improved by moving chains or wire slings in the fresh mortar when areas are inaccessible. The grout shall be poured continuously and from one side only, to avoid entrapment of air while grouting. Make sure the mortar fills the entire space to be grouted and remains in contact with the plate throughout the entire grouting placement.
Where grout must flow some distance, make the initial batch slightly more fluid or flowable than required; this lubricates the surfaces and avoids blockage of the grout that follows.
Due to differences in temperature between the grout under the base plate, and exposed shoulders that are subject to more rapid temperature changes, debonding or cracking can occur. Avoid shoulders wherever possible. If shoulders are required, they should be firmly anchored with reinforcement to the substrate to prevent debonding.
SikaGrout®-928 grout is suitable for use with most types of pumping equipment.
Note: Do not use vibrator for placing the grout!

CURING TREATMENT

Immediately after SikaGrout®-928 is placed, cover all exposed grout with clean wet hessian and keep moist by covering with polythene.

CLEANING OF EQUIPMENT

Tools and mixer must be cleaned immediately after use with water. Cured 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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