

PRODUCT DATA SHEET

SikaGrout® Deep Pour

FLOWABLE, PRECISION CEMENTITIOUS GROUT FOR DEEP POURS UP TO 500 MM

DESCRIPTION

SikaGrout®-Deep Pour is a ready mixed, high quality, Portland cement grout that expands in two stages (Class A and C), to counteract the shrinkage normally associated with Portland cement grouts.

SikaGrout® Deep Pour is a blend of Portland cement, carefully selected and graded aggregates and Sika Admixtures, enabling it to achieve high strengths in short times, making SikaGrout® Deep Pour suitable for grouting of large sections and deep pours of up to 500mm.

USES

- Mass grouting/concreting
- Machine bedplates
- Anchor bolts.
- Bridge bearing pads.
- Pre-cast concrete sections.

PRODUCT INFORMATION

Composition	Cement, selected aggregates and special additives
Packaging	20 kg bags
Shelf life	9 months
Storage conditions	Store properly in undamaged original sealed packaging, in dry cool conditions.
Appearance and colour	Grey powder
Maximum grain size	D _{max} : 4.0 mm
Density	~ 2,300 kg/m ³ Fresh mortar density
Soluble chloride ion content	≤ 0.05% (EN 1015-17)

FEATURES

- Shrinkage compensating properties,
- High early strengths.
- High 28 day strengths.
- Good flow characteristics.
- Adjustable consistency.
- Good impact and thermal resistance.
- Non corrosive to steel or iron.
- Lab tested in accordance with AS 1478.2

CERTIFICATES AND TEST REPORTS

- Qld Roads (TMR) Section 5. Registered and Conforming Products. Part 5.3 Repair Grouts
- RTA Rapid Mortar Bar Test (RTA T363) - Alkali Reactive Particles (Non-Reactive).

TECHNICAL INFORMATION

Compressive strength	<u>1 day</u>	<u>~ 12.0 MPa</u>	(AS 1478.2:2005)
	<u>3 days</u>	<u>~ 30.0 MPa</u>	
	<u>7 days</u>	<u>~ 50.0 MPa</u>	
	<u>28 days</u>	<u>~ 70.0 MPa</u>	
<i>Material and curing conditions at 23°C / 50% r.h. Above results based on 50x50mm cube specimens</i>			
Splitting tensile strength	<u>28 days</u>	<u>~ 5.0 MPa</u>	(AS 1012.10:2000)
Electrical resistivity	<u>7 days</u>	<u>~ 14,000 Ω.cm</u>	(FM5-578) 50mm Probe Spacing
	<u>28 days</u>	<u>~ 39,000 Ω.cm</u>	
	<u>56 days</u>	<u>~ 53,000 Ω.cm</u>	
	<u>90 days</u>	<u>~ 64,000 Ω.cm</u>	

APPLICATION INFORMATION

Consumption	Approximately 102 bags per 1m ³			
Yield	20 kg of powder yields approximately 9.8 litres of grout			
Layer thickness	min. 20 mm / max. 500 mm <i>For application greater than 500 mm in depth, Add a clean, well graded and smooth aggregates to reduce the exothermic heat.</i>			
Flowability	~ 500 mm (Flow trough)	(AS 1478.2:2005)		
Ambient air temperature	+5 °C minimum; +35 °C maximum			
Mixing ratio	2.5 - 2.8 litres of water for 20kg powder			
Substrate temperature	+5 °C minimum; +35 °C maximum			
Pot Life	~30 minutes at +20°C			
Setting time	<u>Temperature</u>	<u>Initial Set</u>	<u>Final Set</u>	(AS 2350.4:2006)
	<u>23°C</u>	<u>~ 4 hrs 40 mins</u>	<u>~ 7 hrs 45 mins</u>	

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

Concrete

Correct and thorough surface preparation is essential to achieve the high performance qualities of Sik-aGrout® Deep Pour.

All surfaces must be clean, sound and free from dust, ice, oils, grease or other surface contaminants such as curing membranes and form release agent etc. Bolt

holes and fixing pockets should be free of dirt and debris by air blasting. For maximum bond, surfaces should be abraded or roughened, preferably by mechanical means such as needle gun, grit blasting, grinding etc.

All prepared surfaces must be saturated with water several hours prior to grouting, ensuring it is free of any surface water or puddles.

Formwork

Where formwork is to be used, all formwork must 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 if vacuum extraction equipment to remove water will not be used. For manual grout application, a header box or hopper must be constructed on one side of the formwork so that a grout head can be maintained during the grouting operation.

Temperature control

Temperature affects setting time and rate of increase for strength. For optimum performance maintain grout, concrete and/or steel substrates within the range of 18-25 °C prior to, during, and for 48 hours

after placement of the grout. At low temperatures (below 10 °C) grout setting time is extended and bleeding may occur. As a result, base plate contact may be reduced. To reduce the setting time of SikaGrout-Deep Pour, accelerating admixtures such as Sika-4A or Sika Rapid-1 may be added. At high temperatures (greater than 30 °C) grout setting time is reduced, affecting placement. It is recommended that grouting at high temperatures be sheltered from the heat, or be conducted early in the morning.

It is good practice to keep materials cool in high temperatures using cold water for mixing. Setting times can also be increased using a retarding admixture such as SikaTard-930. It is suggested that site trials be conducted to determine optimum dosage rates for recommended admixtures. For further details contact Sika's Technical Department.

MIXING

SikaGrout® Deep Pour must be mechanically mixed using a mechanical grout mixer and suitable mixing container. It is recommended to mix a full bag in clean container using an electric drill / spiral drill and spiral mixer at a speed of approximately 500 rpm.

Pour the correct amount of water into a suitable clean mixing container. While stirring slowly with drill and spiral mixer, add the complete bag of powder into the water. Mix continuously for 3-5 minutes to achieve a uniform and lump free smooth consistency.

Do not add more water than the maximum specified.

APPLICATION

SikaGrout® Deep Pour can be placed by gravity flow or by pump. It is essential that proper placing on the job site is practised to ensure placement is completed without problems. Sufficient labour, grout and equipment must be present to ensure continuous placement.

Gravity Flow

Mixed grout should be poured one side of the void to avoid air entrapment. Grout is best poured over short distances to ensure this. Use a suitable header box, maintaining the grout head at all times to ensure continuous flow. To facilitate grout compaction and top plate contact, use rodding, tamping or flexible strapping in short strokes while maintaining an adequate head of grout. Do not vibrate as this will cause segregation. Any adjacent machinery or equipment causing vibration should be shut down until initial set (5-6 hrs).

Pumping

When pumping SikaGrout-Deep Pour, ensure the pump is suitable for the grout consistency and for the distance and height it is to be pumped. A positive displacement pump is recommended.

Place grout by pumping into the farthest corner, filling the space gradually. Ensure that air is not entrapped under the base plate. Maximum aggregate size is 5mm. Ensure that selected pump is suitable for pumping this size of aggregate.

CURING TREATMENT

Suitable curing methods such as plastic sheet, wet hessian, liquid membrane etc. must be used to protect the freshly applied grout from the drying effects of sun and wind. Curing must commence immediately after placement, and continue for at least 7 days. Curing is vital to the ultimate performance of grout as it allows optimum strength development and ensures tight contact with the baseplate.

CLEANING OF EQUIPMENT

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

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.

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

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