

PRODUCT DATA SHEET

SikaGrout®-800

High-performance cementitious grout with reduced carbon footprint

DESCRIPTION

SikaGrout®-800 is a 1-part, shrinkage-compensated, high-performance cementitious engineering grout.

USES

SikaGrout®-800 is used for:

- Grouting heavy equipment or machine bases
- Grouting under support base plates
- Bed joints in precast concrete sections
- Sealing around penetrations
- Steel reinforcement anchoring
- Repairing concrete structures and components
- Concrete exposure classes XC 1-4, XF 1-4, XD 1-3, XS 1-3 and XA 1-2 as described in EN 206

SikaGrout®-800 is used for interior and exterior applications.

Please note:

- The Product may only be used by experienced professionals.

FEATURES

- Uses recycled raw materials
- Application thickness 6 mm to 300 mm
- Dust-reduced
- Sulphate-resistant
- High final strength
- Shrinkage-compensated both in plastic and hardening stage
- Fluid consistency
- No segregation or bleeding
- Ready to use, just add water
- Easy to mix and apply
- Can be pumped or poured
- Low permeability
- Non-corrosive
- Very low VOC emissions

SUSTAINABILITY

- Contributes towards satisfying Materials and Resources (MR) Credit: Building product disclosure and optimization — Environmental Product Declarations under LEED® v4 — 1 point
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Sourcing of Raw Materials under LEED® v4 — 1 point
- Contributes towards satisfying Materials and Resources (MR) Credit: Building Product Disclosure and Optimization — Material Ingredients under LEED® v4 — 1 point
- Contributes towards satisfying Materials and Resources (MR) Credit: Environmental Product Declarations: Option 1 under LEED® v4.1 — 1 point
- Contributes towards satisfying Materials and Resources (MR) Credit: Sourcing of Raw Materials under LEED® v4.1 — 1-2 points
- Contributes towards satisfying Materials and Resources (MR) Credit: Material Ingredients: Option 2 under LEED® v4.1 — 1 point
- Contributes towards satisfying Indoor Environmental Quality (EQ) Credit: Low-Emitting Materials under LEED® v4 — 1–3 points
- Specific Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by BRE Global
- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)
- VOC emission classification GEV Emicode EC1^{plus}

CERTIFICATES AND TEST REPORTS

- CE marking and declaration of performance based on EN 1504-3:2005 Products and systems for the protection and repair of concrete structures — Structural and non-structural repair

- CE marking and declaration of performance based on EN 1504-6:2004 Products and systems for the protection and repair of concrete structures — Anchoring reinforcing steel bar
- Combination products ÖNORM B 3309-1, SikaGrout®-800, Hartl, Test Report No. 013595/4
- Sea water resistance NF P 18-837, SikaGrout-800

PRODUCT INFORMATION

Composition	Sulphate-resistant cement, supplementary cement replacement, selected aggregates and additives	
Packaging	Standard bag	25 kg
	Refer to the current price list for available packaging variations.	
Colour	Grey	
Shelf life	Standard bag	12 months from date of production
Storage conditions	The Product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between +5 °C and +35 °C. Always refer to the packaging. Refer to the current Safety Data Sheet for information on safe handling and storage.	
Maximum grain size	2 mm	
Soluble chloride ion content	≤ 0.05 %	(EN 1015-17)
Appearance	Powder	

TECHNICAL INFORMATION

Compressive strength	Cured 24 h at +21 °C	30 MPa	(EN 12190)
	Cured 7 d at +21 °C	55 MPa	
	Cured 28 d at +21 °C	80 MPa	
Modulus of elasticity in compression	Cured 28 d at +21 °C	32 GPa	(EN 13412)
Flexural-strength	Conditioned 24 h at 20 °C	6 MPa	(EN 12190)
	Conditioned 7 d at 20 °C	8 MPa	
	Conditioned 28 d at 20 °C	10 MPa	
Pull-out resistance	≤ 0.6 mm at load of 75 kN		(EN 1881)
Shrinkage	Linear: ≤ 0.7 mm/m after 91 days		(EN 12617-4)
Restrained shrinkage / expansion	≥ 2.0 MPa		(EN 12617-4)
Tensile adhesion strength	≥ 2.0 MPa		(EN 1542)
Thermal compatibility	≥ 2.0 MPa (Part 1 - Freeze-Thaw)		(EN 13687-1)
Reaction to fire	Class A1		(EN 13501-1)
Carbonation resistance	dk ≤ control concrete MC (0.45)		(EN 13295)

APPLICATION INFORMATION

Mixing ratio	Fluid consistency	3.10 L to 3.25 L
	Fluid consistency — water ratio by weight	12.4 % to 13 %

Consumption	2 kg powder per m ² per mm layer thickness Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply the Product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.	
Yield	12.7 L of mortar per 25 kg bag Note: Consumption data is theoretical and does not allow for any additional material due to surface porosity, surface profile, variations in level, wastage or any other variations. Apply the Product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.	
Layer thickness	Maximum	300 mm
	Minimum	6 mm
Material temperature	Maximum	+35 °C
	Minimum	+5 °C
Ambient air temperature	Maximum	+35 °C
	Minimum	+5 °C
Substrate temperature	Maximum	+35 °C
	Minimum	+5 °C
Pot Life	At +20 °C	45 minutes
	Pot life depends on temperature Note: Pot life will be shorter at higher temperatures. Pot life will be longer at lower temperatures.	
Fresh mortar density	2.25 kg/l	(EN 1015-6)

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 PREPARATION

CONCRETE

The substrate must be structurally sound, thoroughly clean, free from oil, grease, dust, loose material, surface contamination and materials which will reduce adhesion strength.

1. Remove delaminated, weak, damaged and deteriorated substrate using suitable mechanical preparation techniques such as high-pressure water jetting or abrasive blast cleaning equipment.

- Remove any debris from pockets or holes for structural fixings.

The substrate is structurally sound, thoroughly clean, and has a textured finish exposing the aggregate.

PRE-WETTING

1. Thoroughly saturate the prepared concrete substrate with clean water.
2. Do not allow the substrate to dry within this time.
3. Remove all water from within the formwork, cavities or pockets.

The final surface has a dark matt appearance (saturated-surface-dry) without glistening.

STEEL

Surfaces must be sound, clean, dry and free of contaminants such as dirt, oil, grease, coatings and loose friable material.

Suitable techniques for substrate preparation include the following:

- Abrasive blast cleaning
 - High-pressure water-blasting
 - Grinding
1. Prepare the substrate mechanically using a suitable technique.
 2. Apply the Product immediately to prevent re-oxidizing and rust formation.

The substrate has a bright metal finish with a surface profile to satisfy the necessary tensile adhesion strength requirement.

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SHUTTERING OR FORMWORK

1. Select suitable formwork (permanent or temporary) of sufficient strength to contain the grout around areas such as base plates.
2. Ensure all edges and joints of the formwork are sealed tightly to prevent leakage or seepage of the grout.
3. If vacuum extraction equipment is not used to remove pre-wetting water, ensure the formwork comprises outlets for the pre-wetting water to drain.
4. Coat all surfaces of the formwork that will come into contact with the grout with polyethylene film or release agent to prevent adhesion.
5. Construct a header box or hopper on one side of the formwork to maintain a minimum grout head of 150 mm to 200 mm during the grouting process.

MIXING

ELECTRIC SINGLE OR DOUBLE PADDLE MIXER

IMPORTANT

Do not add more water than the maximum specified

1. Pour the minimum amount of water into a suitable clean mixing container.
2. Stir the water slowly with a spiral paddle (300–500 rpm).
3. Add the complete bag of powder into the water.
4. Mix continuously for 3 minutes, until a uniform mix is achieved.
5. Within the mixing time, add more water up to the maximum allowed until the required consistency is achieved.
6. Wait for 2–3 minutes to release entrained air bubbles.
7. Remix briefly for maximum 1 minute.

FORCED ACTION PAN MIXER (NOT CONTINUOUS)

IMPORTANT

Carry out equipment trials

Carry out equipment trials to make sure the Product can be mixed satisfactorily before full project application.

IMPORTANT

Do not use continuous mixing equipment

The Product is not designed for processing with continuous mixing equipment.

1. Pour the minimum amount of water according to the mixing ratio into the mixer.
2. While stirring the water, slowly add the powder.
3. Within the mixing time, add more water up to the maximum allowed until the required consistency is achieved.
4. Mix continuously for a minimum of 3 minutes. For larger mixes the mixing time must be extended to approximately 5 minutes or as necessary.
5. Mix until the material achieves a lump-free, smooth consistency.

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

IMPORTANT

Risk of cracking due to application in direct sun or strong winds

1. Do not apply the Product in direct sun, strong winds or both.

IMPORTANT

Risk of reduced strength gain and impaired physical properties in cold weather

Take the following measures in cold weather:

1. Store bags in a warm environment.
2. Use warm mixing water to assist with achieving strength gain and maintaining physical properties.

IMPORTANT

Risk of cracking and impaired physical properties in hot weather

Take the following measures in hot weather:

1. Store bags in a cool environment.
2. Use cold mixing water to assist with controlling the exothermic reaction to reduce cracking and to maintain physical properties.

PLACING MANUAL APPLICATION

Preconditions

After mixing, allow material to remain in the mixing container for ~3 minutes to release entrained air bubbles.

1. **IMPORTANT** Avoid trapping air. Pour the mixed grout into the header box or hopper ensuring continuous grout flow during the complete grouting operation.

PLACING: PUMP APPLICATION

Use grout pumps for large volume placement.

1. Conduct equipment trials to confirm the product can be pumped satisfactorily before full project application

SURFACE FINISHING

1. **IMPORTANT** Do not add water to the surface and do not overwork the surface during finishing. Finish exposed grout surfaces to the required surface texture as soon as the grout has started to stiffen.
2. Remove the formwork when the grout has initially hardened.
3. Trim the grout shoulders while the concrete is "green". Minimise shoulders to avoid cracking.

CURING TREATMENT

Protect exposed grout surfaces after finishing from premature drying and cracking using an appropriate curing method such as curing compounds, moist geotextile membranes, hessian or polythene sheeting. In cold weather, apply insulated blankets to maintain a constant temperature to prevent surface damage from freezing and frost.

CLEANING OF EQUIPMENT

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

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.

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LEGAL NOTES

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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