BUILDING TRUST

PRODUCT DATA SHEET

SikaGrout®-212

General-purpose, non-shrink cementitious grout

DESCRIPTION

SikaGrout®-212 is a one-part, free-flowing, non-shrink cementitious grout with a special two-stage shrinkage-compensating mechanism.

USES

SikaGrout®-212 is used for:

- General-purpose grouting
- Ram-in-place applications as a dry-pack grout
- Trowel applications as a medium-flow grout
- Pouring or pumping applications as a high-flow grout
- On-grade, above-grade and below-grade grouting

SikaGrout®-212 is used for grouting and fixing the following elements:

- Machine and column base plates
- Dowel and reinforcing bars
- Anchor rods
- Bearing plates
- Bed joints in precast concrete sections
- Filling cavities, voids, gaps and recesses
- Post fixings

SikaGrout®-212 is used for interior and exterior applications.

Please note:
- The Product may only be used by experienced professionals.
- The Product is not suitable for use in patch repair.
- The Product is not suitable for use as a levelling mortar for flooring works or overlays in unconfined spaces.

CHARACTERISTICS / ADVANTAGES

- Ready-to-mix, pre-batched units
- Shrinkage-compensated both in plastic and hardening stage
- Adjustable consistency
- No segregation or bleeding
- Very good pumpability
- Good flowability
- Good adhesion to concrete
- Free from chlorides and metallic particles
- Non-corrosive
- Low heat gain
- Good resistance to alternating freeze-thaw exposure
- Good resistance to water and oils

SUSTAINABILITY

- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut für Bauen und Umwelt e.V. (IBU)

APPROVALS / CERTIFICATES

Kenya Bureu of Standards - SM#12474

PRODUCT INFORMATION

Composition	Cement, selected fillers and aggregates, special additives
Packaging	25 Kg
Appearance / Colour	Grey Powder
Shelf life	12 months from date of production. Refer to product packaging.

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.
Soluble chloride ion content	≤ 0.05 % (EN 1015-17)
Colour	Powder

TECHNICAL INFORMATION

Compressive strength	1 Day (24 Hours)	7 days	28 Days
	18 - 25 MPa	45 - 50 Mpa	55 - 60 Mpa
Tensile strength in flexure	Approx. 9.0 MPa (28 Days)		

APPLICATION INFORMATION

Mixing ratio	3.25 - 3.75 litres per 25 kg bag	
Consumption	Approx. 20 kg powder per 10 mm thickness for each m^2.	
Yield	12–13 L grout 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	10 - 100 mm	
Ambient air temperature	Maximum	+30 °C
	Minimum	+5 °C
Substrate temperature	Maximum	+30 °C
	Minimum	+5 °C
Pot Life	30 mins **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	Approximately 2.1 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.

FURTHER INFORMATION

Sika Method Statement 850 21 01 Cementitious Grouting of Machine Bases and Base Plates

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.

- 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.

ALIGNING EQUIPMENT

1. Set and align equipment.
2. If shims are to be removed after the grout has set, lightly grease them for easy removal.

SHUTTERING OR FORMWORK

1. Select suitable formwork (permanent or temporary) of sufficient strength to contain the grout around areas such as base plates.
2. Construct formwork around machines so that it is at least 2 cm higher than the bottom of the plate to be underpoured.
3. Ensure all edges and joints of the formwork are sealed tightly to prevent leakage or seepage of the grout
4. If vacuum extraction equipment is not used to remove pre-wetting water, ensure the formwork comprises outlets for the pre-wetting water to drain.
5. Coat all surfaces of the formwork that will come into contact with the grout with polyethylene film or release agent to prevent adhesion.
6. 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.

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.

MIXING

ELECTRIC SINGLE OR DOUBLE PADDLE MIXER

Note: **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.
8. Do not retemper grout by adding water or remixing after it stiffens.

FORCED ACTION PAN MIXER (NOT CONTINUOUS)

Note: **Carry out equipment trials.** Carry out equipment trials to make sure the Product can be mixed satisfactorily before full project application. **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.
6. Do not retemper grout by adding water or remixing after it stiffens.

ADDITION OF AGGREGATE

The application thickness of the Product can be increased with the addition of aggregate. This technique is subject to the following limitations:

- Only add aggregates for filling voids or applications subject to compression loads, such as under base plates and machine bases.
- Only add aggregates for deep applications.
- Only add aggregates when the grout is in a plastic or flowable consistency.

Select aggregates with the following features:

- Non-reactive
- Rounded, clean, well-graded
- Saturated-surface-dry (SSD)
- Low absorption
- High density

Note: Use 30–50 % coarse aggregate by weight of Product, for example, up to 12.5 kg aggregate for a 25 kg bag of Product. Add the aggregate to the mixing container after adding the water and powder.

APPLICATION

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.

Risk of cracking due to application in direct sun or strong winds: Do not apply the Product in direct sun, strong winds or both.

Risk of cracking and impaired physical properties in hot weather - Take the following measures in hot weather:

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

Adverse chemical reaction due to contact with aluminium: As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure.

- Insulate potential areas of contact by coating aluminum elements such as bars, rails and posts with a epoxy resin such as Sikadur®-32 Normal.

Placing Manual Application

- Preconditions: Nearby operating equipment that causes excess vibration of the foundation or base plate has been shut down. It must remain shut down until the newly-placed grout has finally set.
- Material has been left in the mixing container for ~3 minutes to release entrained air bubbles.
- Place or pour the mixed grout into the form from one side only. Avoid trapping air.
- Vibrate, pump, or ram grout as necessary to achieve flow or compaction.
- Ensure the grout fills the entire space to be grouted and makes full contact with the elements to be grouted.

Placing: Pumping Application

- Use grout pumps for large volume placement.
- Conduct equipment trials to confirm the product can be pumped satisfactorily before full project application.

Surface Finishing

- Finish exposed grout surfaces to the required surface texture as soon as the grout has started to stiffen. Do not add water to the surface and do not overwork the surface during finishing.
- Remove the formwork when the grout has initially hardened.
- 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.

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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