

PRODUCT DATA SHEET

SikaGrout[®]-212 Fluid

CEMENTITIOUS, HIGH FLOW, NON-SHRINK, GENERAL PURPOSE PRECISION GROUT

PRODUCT DESCRIPTION

SikaGrout[®]-212 Fluid is cementitious, one-part, ready-to-mix, shrinkage compensated (non-shrink), free flowing, pumpable, general purpose engineering grout. Suitable for machine bases, void filling and anchoring. Application thickness: 10 to 100 mm. Meets the requirements of EN 1504-6: Anchoring of reinforcing bars.

USES

- General purpose grouting.
- Grouting heavy equipment / machine bases.
- Under stanchion plates.
- Bedding joints in precast concrete sections.
- Filling voids, cavities, gaps and recesses.
- Sealing around penetrations.
- Post fixings.
- Suitable for installing reinforcement with an anchoring product in accordance with EN 1504-6.
- Backfilling by pouring under support and distribution plates.
- Bridge and crane supports.
- Anchorages of metallic elements (e.g. rebars, bolts, etc.), metal and concrete posts, columns in prefabricated constructions, etc.
- Filling of cracks and confined voids inside concrete masses.
- For exterior and interior use.
- Not to be used for leveling smooth and unconfined surfaces.

PRODUCT INFORMATION

Chemical Base	Special cement, selected aggregates and additives
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 at temperatures between +5 °C and +30 °C. Always

CHARACTERISTICS / ADVANTAGES

- Easy to use (ready to mix powder).
- Pre-batched for quality.
- Just add water.
- High performance.
- High final strength.
- Shrinkage compensated (non-shrink).
- Fluid consistency.
- No segregation or bleeding.
- Can be pumped long distances.
- Good fluidity, excellent for placement by pouring.
- Self-levelling.
- Free of chlorides and metallic particles (does not oxidise in contact with humidity, rather protects the metal against corrosion, due to its pH).
- Slightly expansive.
- Rapid, high mechanical resistance.
- Excellent adhesion to concrete, mortar or steel. Provides a monolithic bond and resists shocks and vibrations.
- Non-corrosive and non-toxic.
- Fire rating and protection properties comparable to concrete.

APPROVALS / STANDARDS

CE Marking and Declaration of Performance to EN 1504-6 - Anchoring of reinforcing steel bar

refer to packaging.

Appearance / Colour Grey powder

Maximum Grain Size D_{max} : ~4 mm

TECHNICAL INFORMATION

Compressive Strength	Water Content	1 day	7 days	28 days	(EN 196-1)
	3,125 Litres per 25kg Bag	≥25MPa	≥40MPa	≥45MPa	
	3,375 Litres per 25kg Bag	≥22MPa	≥35MPa	≥45MPa	
	3,625 Litres per 25kg Bag	≥20MPa	≥30MPa	≥45MPa	

Modulus of Elasticity in Compression ~30 GPa

Flexural Strength	Time	Water Content	Flexural Strength	(EN 196-1)
	28 days	3,375 Litres of Water per 25kg Bag	~10MPa	

Expansion ≥0,1% after 24 hours (maximum 2%)

APPLICATION INFORMATION

Fresh mortar density ~2,3 kg/l

Yield 25 kg of powder yields approximately 12,3 litres of mixed grout

Layer Thickness 10 mm minimum / 100 mm maximum

Ambient Air Temperature +5 °C minimum / +35 °C maximum

Mixing Ratio 3,125 to 3,625 litres of water per 25 kg bag (12,5 to 14,5%)

Substrate Temperature +5 °C minimum / +35 °C maximum

Application Time In order to take full advantage of the expansive properties, SikaGrout®-212 Fluid should be applied as quickly as possible. Preferably not more more than 10 minutes after mixing.

VALUE BASE

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 DOCUMENTS

Method Statement – Cementitious Grouts.

LIMITATIONS

- Keep exposed surfaces to a minimum.
- Avoid application in direct sun and / or strong wind.
- Use only on clean, sound substrates.
- The substrate must be free of ice.
- Do not exceed the maximum water addition.
- Do not use vibrating poker.
- Do not use continuous mixing equipment.
- Pour or pump from one side only.

- Do not add additional water during the surface finishing, as this will cause discoloration and cracking.
- To avoid cracking in warm temperatures, keep bags cool and use cold water for mixing.
- Avoid exposure during rainfall and prior to final set.

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

SUBSTRATE QUALITY

Concrete

The concrete must be structurally sound, thoroughly clean, free from oil, grease, dust, loose material, surface contamination and materials which will impair the grout flow or reduce adhesion strength. Laitance, delaminated, weak, damaged and deteriorated concrete, and where necessary sound concrete, must be removed by suitable mechanical preparation as directed by the engineer or supervising officer. Any pockets or holes for structural fixings must also be thoroughly cleaned of all debris.

Shutter 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. As a guide, leave a gap of approximately 150 mm on one side and 50 mm on the opposite side.

A header box or hopper should be constructed on one side of the formwork so that a grout head of 150 to 200 mm can be maintained during the grouting operation.

MIXING

Drill and Spiral Mixer

Pour the correct amount of water into a suitable clean mixing container. While stirring slowly with drill and spiral mixer (200 to 500 rpm), add the complete bag of powder into the water. Mix continuously for 3 minutes to achieve a uniform and lump free, smooth consistency. Do not add more water than the maximum specified.

Grout Mixer

SikaGrout®-212 Fluid must be mixed using suitable grout mixing equipment combined with agitator for continuous large volume mixing. The volume capacity of the 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 satisfactorily.

Pour the minimum water ratio in the correct proportion into the grout mixer. While stirring the water, slowly add the powder to the water. Add more water within the mixing time up to the maximum allowed until the desired consistency is achieved.

Mix continuously for a minimum of 3 minutes. For larger mixes, the mixing time must be extended to approximately 5 minutes (or as necessary) until the grout achieves a lump free, smooth consistency. Do not add more water than the maximum specified.

Note: Do not use continuous mixing equipment.

APPLICATION

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instruc-

tions.

Pre-wetting

The prepared concrete substrate must be thoroughly saturated with clean water for a recommended 12 hours before application of the grout. The surface must not be allowed to dry within this time. Prior to application of the grout, all water must be removed from within formwork, cavities or pockets and the final surface must achieve a dark matt appearance (saturated surface dry) without glistening.

Placing

Apply the material shortly after mixing to take advantage of the expansion properties. Immediately after mixing, pour or pump the mixed grout into the header box or hopper, ensuring continuous grout flow during the complete grouting operation to avoid trapping air. For large volume placement, grout pumps are recommended. Equipment trials must be considered to ensure product can be pumped satisfactorily.

Surface Finishing

Finish exposed grout surfaces to the required surface texture as soon as the grout has started to stiffen. Do not add additional water on the surface. Do not overwork the surface as this may cause surface discolouration and cracking. After the grout has initially hardened, remove formwork and trim edges while concrete is 'green'.

Cold Weather Working

Keep bags in a warm environment 48 hours prior to use. Consider using warm water to assist with achieving strength gain and maintaining physical properties.

CURING TREATMENT

Protect the fresh material from premature drying and cracking using an appropriate curing method (e.g. curing compound, moist geo-textile membrane, hessian, polythene sheet, etc.). In cold weather, apply insulated blankets to maintain a constant temperature to prevent surface damage from freezing and frost.

CLEANING OF TOOLS

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

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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