

PRODUCT DATA SHEET

SikaGrout[®]-312

Multi-purpose high performance engineering grout

DESCRIPTION

SikaGrout[®]-312 is a cement based, 1-component, dust reduced, ready to mix, expanding, shrinkage compensated, high precision grout from 6 to 125 mm layer thickness.

USES

- Grouting heavy equipment / machine bases, base plates, bedding joints in pre-cast concrete sections, filling cavities, gaps and recesses, sealing around penetrations, post fixings
- Concrete protection and repair (principle 3, method 3.1 and 3.2 of EN 1504-9)
- Structural strengthening (principle 4, method 4.2 and 4.4 of EN 1504-9)
- Preserving or restoring passivity (principle 7, method 7.1 and 7.2 of EN 1504-9)

FEATURES

- Easy to use (ready-to-mix powder)
- Easy to mix, only add water
- Dust reduced
- Expansion ≥ 0.1 %

- VOC-free
- Free of quartz sand
- Non-corrosive
- Very low shrinkage
- High sulfate resistance
- High compressive strength
- High early strength after 24 hours
- Good early strength at +5 °C
- High freeze-thaw resistance with de-icing salts (XF4)

SUSTAINABILITY

SikaGrout[®]-312 is complying the conformity with LEED v4 VOC emissions specifications in LEED EQ credit "Low-emitting products" in regard of:

- the requirements of CDPH-IAQ (California Department of Public Health); an TVOC below 0.5 mg/m³ in both office and class room
- the requirements of SCAQMD rule 1188 (2005)

CERTIFICATES AND TEST REPORTS

- Initial test in accordance with ÖNORM B 3329, MPA Hartl, Austria
- CE-Mark initial test in accordance with EN 1504-3 and EN 1504-6, MPA Hartl, Austria
- Sulfate resistance in accordance with ÖNORM B 3309, MPA Hartl, Austria
- BE-II acc. to SN 640464 – classification high
- AAR resistance
- A1 fire rating

PRODUCT INFORMATION

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|-----------------------|---|
| Composition | Cement, selected fillers and aggregates, special additives |
| Packaging | 25 kg bags |
| Appearance and colour | Grey powder |
| Shelf life | 12 months from date of production |
| Storage conditions | Store properly in dry conditions in undamaged and unopened original |

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sealed packaging.

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|------------------------------|-------------------------------------|
| Density | Fresh mortar density ~ 2.3 kg/litre |
| Maximum grain size | D_{max} : 2 mm |
| Soluble chloride ion content | ≤ 0.05 % |

TECHNICAL INFORMATION

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|--------------------------------------|--|--|----------------------------|--------------|
| Compressive strength | <u>1 day</u> ~ 40 MPa | <u>7 days</u> ~ 70 MPa | <u>28 days</u> ~ 90 MPa | (EN 12190) |
| Modulus of elasticity in compression | ~ 29 GPa | | | (EN 13412) |
| Effective bearing area | > 85 % | | | |
| Flexural-strength | <u>1 day</u> ~ 6 MPa | <u>28 days</u> ~ 9 MPa | (EN 12190) | |
| Pull-out resistance | ≤ 0.6 mm at load of 75 kN | | | (EN 1881) |
| Shrinkage | < 1.0 mm (after 91 days) | | | |
| Expansion | ≥ 0.1 % (after 24 hours) | | | |
| Tensile adhesion strength | ≥ 2.5 MPa | | | (EN 1542) |
| Thermal compatibility | ≥ 2.5 MPa | Part 1 - freeze-thaw with de-icing salts | | (EN 13687-1) |
| Reaction to fire | Euro Class A1 | | | (EN 1504-6) |
| Capillary absorption | ≤ 0.5 kg · m ⁻² · h ^{-0.5} | | | |
| Carbonation resistance | $dk \leq$ control concrete (MC(0.45)) | | | (EN 13295) |

APPLICATION INFORMATION

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|-------------------------|--|
| Mixing ratio | 3.3 – 3.4 litres of water per 25 kg bag |
| Consumption | Depends on the substrate roughness and thickness of layer applied. As a guide, ~ 20 kg of powder per 10 mm thickness per m ² |
| Yield | 1 bag yields approximately 12.3 litres of mortar |
| Layer thickness | minimum 6 mm / maximum 125 mm |
| Ambient air temperature | +5 °C minimum / +30 °C maximum |
| Substrate temperature | +5 °C minimum / +30 °C maximum |
| Pot Life | ~ 45 minutes at +20 °C |

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

- Not to be used for open repair works or overlay in unconfined spaces
- Refer to Method Statement for Cementitious Grouts for more information regarding substrate prepara-

tion or refer to the recommendations in EN 1504-10

- Avoid application in direct sun and/or strong wind
- Do not add water under or over recommended dosage
- Apply only to sound, prepared substrate
- Do not add additional water during the surface finishing as this may cause discolouration and cracking
- Protect freshly applied material from freezing and frost
- Keep exposed surfaces to a minimum

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

The concrete shall be thoroughly clean, free from dust, loose material, surface contamination and materials which reduce bond or prevent suction or wetting of the grout. Delaminated, weak, damaged and deteriorated concrete and where necessary sound concrete shall be removed by suitable means.

MIXING

SikaGrout®-312 can be mixed with a low speed (< 500 rpm) hand drill mixer to avoid entraining too much air. Mix only full bags for best results. Pour the recommended quantity of water in a suitable mixing container. While stirring slowly, add the powder to the water and mix thoroughly at least for 3 minutes adding additional water within the mixing time if necessary to the maximum specified amount to adjust the grout to the required consistency.

APPLICATION

Remove excess water from the substrate e.g. with clean sponge, until the surface is dark matt in appearance without glistening (saturated surface dry). Surface pores and pits shall not contain water. Let the grout stand for approx. 5 minutes to release air entrained by mixing. Pour grout into the prepared openings using a sufficient pressure head to maintain continuous flow of grout. Ensure air displaced by the mortar can easily escape. For optimum use of the expansion properties apply the grout within approx. 15 minutes.

CURING TREATMENT

Keep visible exposed grout surfaces to a minimum. Protect fresh material from premature drying using appropriate curing methods e.g. curing compound, moist textile membrane, polythene sheet, etc.

CLEANING OF EQUIPMENT

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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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