

PRODUCT DATA SHEET

SikaGrout[®]-544

(formerly MFlow 544)

High strength, non-shrink, cementitious mortar

DESCRIPTION

SikaGrout[®]-544 is a ready-to-use product in powder form, which requires only on-site addition of water to produce a non-shrink mortar of predictable performance.

USES

SikaGrout[®]-544 is formulated for use at plastic consistency, and may be used with confidence for bedding, repairing, grouting and void filling operations such as:

- Concrete repairs
- Void filling between old and new concrete
- Floor patching
- Packing under columns and stanchions
- Caulking of concrete pipes
- Filling tie-bar holes
- Re-profiling of stanchion or mast bases when formwork is undesirable

FEATURES

- Non-shrink
- Adjustable consistency
- Proven and predictable performance
- Trowellable
- High bond strength to steel and concrete
- Early strength development
- Good fatigue and impact resistance
- Impermeable

PRODUCT INFORMATION

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| Packaging | SikaGrout [®] -544 is supplied in 30kg bags. |
| Shelf life | Storage life is approximately 12 months when stored as above in original sealed bags. |
| Storage conditions | Store out of direct sunlight, clear of the ground, on pallets protected from rainfall. Avoid excessive compaction. |

TECHNICAL INFORMATION

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|-----------------------------|-------------------------------|--------------|
| Compressive strength | Compressive Strength 24 hours | 29.0 |
| | N/mm ² | 3 days 34.5 |
| | (BS 6319 Part 2): | 7 days 45.0 |
| | | 28 days 55.0 |
| Flexural-strength | Flexural Strength 24 hours | 4.5 |
| | N/mm ² | 3 days 8.0 |
| | (BS 6319 Part 4): | 7 days 9.0 |

| | |
|-------------------------|-------------------------------|
| Tensile strength | Tensile Strength 24 hours 3.5 |
| | N/mm ² 3 days 3.6 |
| | (BS 6319 Part 7): 7 days 4.2 |
| | 28 days 5.0 |

| | |
|-----------------------|-------------------------------|
| Shear strength | Slant Shear Bond 28 days 37.0 |
| | N/mm ² |
| | (BS 6319 Part 4): |

APPLICATION INFORMATION

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| Mixing ratio | When mixed with 4.7ltr of water, a 30kg bag is added. |
| Consumption / Yield / Dosage (PRINT single line) | 15.5-16ltr/30kg bag dependent on water addition rate 65 x 30kg bags/m ³ |

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.

LIMITATIONS OF USE

The temperature of both the grout and elements coming into contact with the grout should be in the range of +5°C to +35°C. Do not use water in an amount, or at a temperature, that will produce a consistency more than fluid or cause mixed grout to bleed or segregate. **DO NOT OVERWORK AND AVOID USING MECHANICAL VIBRATION.**

UNDER NO CIRCUMSTANCES SHOULD SikaGrout®-544 BE RE-TEMPERED BY THE LATER ADDITION OF WATER. It is essential that a mechanically powered grout mixer be used to obtain the optimum properties.

As with other products containing Portland cement, the cementitious material in SikaGrout®-544 mortar may cause irritation. Avoid contact with eyes and prolonged exposure. In case of contact with eyes, immediately flush with plenty of water for at least 15 minutes; and call a physician. In case of contact with skin, wash skin thoroughly.

IMPORTANT CONSIDERATIONS

For free flowing grouting operations, consider the use of SikaGrout®-544. For precision grouting of heavy machinery, use SikaGrout®-928.

When a very rapid set is required in areas subject to chemical spillage or contamination, use epoxy grouts Sikadur®-915 or SikaFlow®-648..

For extreme chemical resistance, grout products are available from the CEILCOTE range.

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

NOTES ON INSTALLATION

- To achieve the properties described, water additions should be accurate to + 0.1ltr.
- Water should be slowly added over a 1½ minute period, and then mixing continued for a further 2 minutes.
- It is important that a forced-action mixer is used to ensure complete dispersion of water and thorough mixing thereafter.

GROUTING A SPACE USING PLASTIC MORTAR:

Formwork is erected on 3 sides (and is prepared for the fourth). Plastic mortar is rammed into place, filling all voids. Without delay, a vertical or sloping form is fixed on the fourth side, the grout is placed and is consolidated by thorough hand punning (i.e., caulking by ramming). Just before final set, the surplus grout is removed.

SURFACE PREPARATION

All surfaces in contact with the material must be sound, dense and clean. All laitance and any unsound material should be removed – an evenly scabbled, slightly textured surface is required, with all dust and dirt removed. (Note: heavy scabbling, creating deep troughs or high peaks, is unsuitable). Surfaces must be pre-wetted to thoroughly dampen the concrete, but any free surface water must be removed before SikaGrout®-544 is placed.

For large areas of application, such as floor toppings or concrete repair, Sikadur®-1414RS, epoxy bonding agent, should be used on the interface to ensure total bond.

If the benefit of the expansive formulation is to be gained, SikaGrout®-544 must be always placed in rectangular spaces with truly vertical edges. Feather edging is not recommended. Minimum acceptable depth is 10mm. Maximum recommended depth for toppings is 50mm.

MIXING

First dry mix contents of bag; then thoroughly mix with the specified amount of water.

APPLICATION

All of the mix should be placed within 45 minutes of water addition.

No water should be added for re-tempering.

Placing must not take place below 5°C. Below 8°C, it is advisable to tent before placing, to warm the substrate to 8°C minimum, and subsequently to maintain the placed mortar at 8°C minimum.

For plastic consistencies, tamping is essential to achieve good compaction. Do not vibrate.

CURING TREATMENT

Curing of the exposed surfaces of SikaGrout®-544 must commence immediately. Following placement, the exposed surfaces must be continuously cured for 7 days after finishing

operations. This will prevent early drying shrinkage and help to develop strength, durability and other desired properties. Any deficiencies in the method of curing may also reduce the amount of initial expansion, which is needed to offset later drying shrinkage. The use of MasterKuer curing compounds is strongly recommended.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

Sika Egypt

1st Industrial Zone (A)
Section #10, Block 13035
El Obour City, Egypt
TEL: +202 44810580
FAX: +202 44810459
egy.sika.com



Product Data Sheet

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