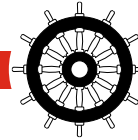


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# Sopro TFb

## High-strength tile grout

554 grey 15 · 557 concrete grey 14



High-strength, rapid-set, trass-bearing, cementitious tile grout, meeting CG2 WA requirements to DIN EN 13888, for 3–30 mm joint widths. Low-chromate to Regulation (EC) No 1907/2006, Annex XVII.

- For 3–30 mm joint widths
- Exceedingly high mechanical strength and abrasion resistance
- Meets minimum requirements in terms of abrasion resistance ( $\leq 250 \text{ mm}^3$ ) and compressive strength ( $\geq 45 \text{ N/mm}^2$ ) for reaction resin mortars
- Ideal for catering kitchens, workshops, washing facilities and other industrial or commercial spaces
- Dense microstructure thanks to Mikrodur® technology
- High resistance to freeze-thaw cycles and high-pressure/steam jet cleaning
- Good adhesion to joint faces
- Compressive strength  $\geq 60 \text{ N/mm}^2$  after dry storage and  $\geq 75 \text{ N/mm}^2$  after freeze-thaw cycling
- Approved for shipbuilding as system component
- For walls and floors, indoors and outdoors
- With official test certificates
- DGNB (German Sustainable Building Council): Top quality level 4, Line 8<sup>1)</sup>
- EMICODE system of GEV (German Association for Control of Emissions in Products for Flooring Installation): EC1<sup>PLUS</sup> R ("very-low-emission-plus") rating

### Use

For grouting stoneware, fully vitrified stoneware, natural and cast stone coverings. Not suitable for absorbent ceramics (earthenware). Particularly suitable for joints subject to high mechanical loads in workshops, washing facilities, catering kitchens and other industrial or commercial spaces, in swimming pools as well as on balconies and patios. Also suitable for use in conjunction with floor heating.

### Mixing ratio

3.75–4.25 ltr water : 25 kg Sopro TFb

### Maturing time

3–5 minutes

### Working life

25–35 minutes; stiffened mortar shall not be retempered by addition of water or fresh mortar to restore workability.

### Walkable

After approx. 1.5 hours

### Loadable

Fully loadable after approx. 6 hours

### Application temperature

Between +5 °C and max. +25 °C

### Joint width

3–30 mm

### Coverage

Approx. 2.5 kg/m<sup>2</sup> for 11.5×24 cm tiles and approx. 10 mm joint width

### Shelf life

Approx. 12 months, subject to storage on pallet in dry conditions in original unopened containers

### Packaging

25 kg bag

<sup>1)</sup> Based on DGNB (German Sustainable Building Council) criterion "ENV1.2 Local Environmental Impact" (2015 version).

## Properties

Sopro TFb is a high-strength, rapid-set, cementitious tile grout, meeting CG2 WA requirements to DIN EN 13888, for 3–30 mm joint widths. Use of Mikrodur® microcement in conjunction with special additives lends grout its dense, high-strength microstructure, thereby guaranteeing high mechanical strength and abrasion resistance. Trass content significantly reduces efflorescence.

## Application

Rake out joints to tile thickness before bedding adhesive sets and clean thoroughly. Ensure that bedding adhesive has fully cured prior to grouting. (Please observe guidelines in technical data sheet for relevant bedding adhesive!). Fill clean mixing container with 3.75–4.25 ltr clean mains water for 25 kg dry powder, add correct proportion of grout, and mix mechanically using mixing attachment to produce homogeneous, creamy mortar. To improve material's homogeneity, initially set to somewhat stiffer consistency, thinning later with additional water to achieve workable consistency. After 3–5 minutes maturing time, remix thoroughly.

Grout clean, raked-out joints, which may require slight pre-wetting depending on thickness and suction of tile body, with Sopro TFb using rubber squeegee or grout float, applying slight pressure so as to ensure that joints are completely filled. Do not spread dry mortar powder over joints.

Allow adequate drying time for freshly applied grout, then wash down tiled surface working diagonal to joints and taking care not to wash out surface of joint. This improves smoothness and compactness of joint surface. Where necessary, re-wet with clean water during setting process.

**Note:** Pre-wetting of covering and trial grouting to check complete removability of cement and pigment residue are generally recommended for ceramic coverings with rough, profiled or unglazed finish and for polished fully vitrified stoneware exhibiting surface micropores of varying size. Regularly replace wash water with fresh water. Trial grouting is also recommended for natural stone coverings.

Freshly grouted joints shall be protected against all action that may impair setting, e.g. high temperatures, wind, rain or frost.

Hardening process and colour brilliance of tile grout largely depend on a steady supply of moisture during setting. Constructional solutions that encourage particularly high suction, e.g. traditional thick-bed methods for ceramic coverings, may cause colour variations in grout, though these may even out during drying out process.

For maximum colour uniformity, particularly with heavily pigmented and dark grout colours, exact compliance with specifications regarding mixing water quantity, homogeneous mixing and maturing time is essential. Ensure that a minimum amount of wash water is used for washing down, that wash water is frequently changed and that no water film is left covering joints. Dry rubbing of washed and stiffened joints reduces risk of later efflorescence, while enhancing colour brilliance of joint surface. Unwashed, discolouring sand aggregate present in thick-bed mortars or discolouring substances from adjoining materials may cause staining.

Acidic media may, depending on their concentration, attack and destroy cementitious grouts. For this reason, exact compliance with cleaner manufacturer's instructions on use is required when acidic cleaning agents are used. See list of tested cleaning agents for ceramic finishes in swimming pools issued by Deutsche Gesellschaft für das Badewesen (German Association for Recreational and Medicinal Bath Industry) for recommended products. Surface to be cleaned shall be pre-wetted with water prior to use of acidic cleaning agents and shall be immediately rinsed with plenty of water after cleaning.

**Note:** For applications likely to involve high exposure to cleaners or acids, or in containers/tanks holding waters aggressive to concrete, please contact our Technical Service team. Please consult resistance table!

### For application of Sopro TFb in swimming pools, please observe following points:

Treatment and hygienic requirements for water used in swimming pools and baths shall comply with DIN 19643-1. Filling (i.e. fresh) water and pool water shall also exhibit following properties:

Parameter	Filling water	Pool water
pH value	7.0–8.5	6.5–7.5
Acid capacity	≥ 1.5 mmol/ltr	≥ 0.7 mmol/ltr
Calcium content	50–125 mg/ltr (equivalent to 7–17.5 °dH)	50–125 mg/ltr (equivalent to 7–17.5 °dH)

Failure to maintain these values in long term may lead to chemical attack on hydraulically setting Sopro TFb; treatment system may require adaptation, as appropriate. Carbonate balance of water shall be maintained.

## Specified times

Apply for normal temperature range of +23°C and 50% relative humidity; higher temperatures shorten and lower temperatures lengthen these times.

## Tools/tool cleaning

Mixing attachment, stainless-steel trowel, rubber squeegee, grout float, sponge float, roller set for cleaning; wash tools with water immediately after use.

## Test certificate

### Technische Universität München (TUM):

– "Sopro Tfb 554 high-strength tile grout, 3–30 mm, grey" meets requirements for abrasion resistance under DIN EN 12 808-2 and flexural tensile and compressive strength under DIN EN 12 808-3 to achieve a class CG2 A rating under DIN EN 13 888: 2009-08. It additionally meets requirements placed on class RG reaction resin mortars for abrasion resistance ( $\leq 250 \text{ mm}^3$ ) and compressive strength ( $\geq 45 \text{ N/mm}^2$ ) under DIN EN 13 888:2009-08. Test results for compressive strength:  $\geq 60 \text{ N/mm}^2$  after dry storage and  $\geq 75 \text{ N/mm}^2$  after freeze-thaw cycling

### BG Verkehr (institution for statutory accident insurance and prevention for transport and traffic):

– Approval for shipbuilding in Sopro System 2.4 (wall), MED approval no. 118.316, USCG approval no. 164.112/EC0736/118.316. Wet-applied quantity Sopro Tfb: max. 708 g/m<sup>2</sup>. Other components in Sopro System 2.4: Sopro EPG 522 epoxy primer, Sopro QS 507 fine silica sand, Sopro PU-FD 570 surface sealant for walls, Sopro QS 511 coarse silica sand, Sopro's No.1 flexible tile adhesive (order no. 400), fully vitrified stoneware tile (min. 145 mm, thickness 5 mm). System thickness  $\leq 11 \text{ mm}$ , joints  $\leq 5 \text{ mm}$ .  
– Approval for shipbuilding in Sopro System 3.6 (floor), MED approval no. 124.115, USCG approval no. 164.117/EC0736/124.115. Wet-applied quantity Sopro Tfb: max. 827 g/m<sup>2</sup>. Other components in Sopro System 3.6: Sopro EPG 522 epoxy primer, Sopro QS 507 fine silica sand, Sopro PU-FD 571 surface sealant for floors, Sopro QS 511 coarse silica sand, Sopro's No.1 flexible tile adhesive (order no. 400), fully vitrified stoneware tile (min. 145 mm, thickness 5 mm). System thickness  $\leq 11 \text{ mm}$ , joints  $\leq 5 \text{ mm}$ .

Please observe technical product information for relevant system components.

## Licence

### EMICODE system of GEV (German Association for Control of Emissions in Products for Flooring Installation): EC1<sup>PLUS</sup> R ("very-low-emission-plus") rating

Labelling in accordance with Regulation (EC) No 1272/2008 (CLP)

GHS05, GHS07

**Signal word:** Danger

Contains Portland cement. Exhibits strong alkaline reaction upon contact with moisture/water; protection required for skin and eyes. All standard precautions for the handling of construction materials/chemicals shall be taken.

**Hazard statements:** H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation.

**Precautionary statements:** P102 Keep out of reach of children. P261 Avoid breathing dust. P280 Wear protective

gloves/protective clothing/eye protection/face protection. P302+P352 IF ON SKIN: Wash with plenty of water and soap.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor. P332+P313 If skin irritation occurs: Get medical advice/attention.

**GISCODE (German hazardous substances classification):** ZP1 · Low-chromate to Regulation (EC) No 1907/2006, Annex XVII

## Safety precautions

## Disposal

Disposal considerations. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

91/156/EEC, 91/689/EEC, 94/62/EC and subsequent amendments.

Disposal of hardened product (EC waste code) : 17 01 01

Disposal of not hardened product (EC waste code) : 17 01 01

The suggested European waste code is just based on the composition of the product.

According to the specific process or application field a different waste code may be necessary.

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