

Sopro's No. 1 Flexible Tile Adhesive

A lightweight, high-coverage, cementitious, highly polymer-modified flexible adhesive for installation of ceramic wall/floor coverings and discoloration-resistant natural stone tiles. Low-chromate to Regulation (EC) No 1907/2006, Annex XVII.

- Universal application: Thin-bed, floating-bed and medium-bed laying; filler coats of up to 20 mm thickness
- Complies with German Flexmortar guidelines and class C2 TE S1 requirements to DIN EN 12004
- High sag resistance due to fibre reinforcement
- With lightweight aggregate, high coverage
- Creamy consistency
- Suitable for filling uneven wall and floor surfaces
- Deformability ≥ 2.5 mm
- EMICODE system of GEV (German Association for Control of Emissions in Products for Flooring Installation): EC1PLUS R ("very-low-emission-plus") rating
- DGNB (German Sustainable Building Council): Top quality level 4, Line 8¹⁾
- For indoor and outdoor use

Field Of Application

For use with earthenware, stoneware and fully vitrified stoneware tiles, mosaic, discoloration-resistant natural stone units, cast stone units. In residential, commercial and industrial facilities, damp and wet spaces, swimming pools, operating theatres, escape routes, on facades, balconies and patios. Suitable for filling and levelling smaller areas with max. 20 mm coat thickness (for drylining/dry construction, max. 5 mm coat thickness).

Suitable Substrates

Concrete and lightweight concrete, min. 3 months old; cement screeds; calcium sulphate (anhydrite and self-levelling anhydrite) screeds; mastic asphalt screeds (indoors); board subfloors; heated wall and floor constructions (cement and calcium sulphate screeds); strong existing ceramic, natural stone, terrazzo or cast stone coverings; paperless gypsum panels, gypsum plasterboard and gypsum fibreboard; flush-jointed masonry (no composite masonry); renders made from masonry cement; cement render; lime/cement render; gypsum plaster; rigid foam board. Waterproof membranes with Sopro FDF 525/527 flexible sealing compound, Sopro TDS 823 two-component turbo sealing slurry, Sopro DSF 423 two-component flexible sealing slurry, Sopro DSF 523 one-component flexible sealing slurry, Sopro DSF 623 one-component flexible rapid-set sealing slurry or Sopro PU-FD 570/571 surface sealant for walls/floors.

Substrate Preparation

Substrate must be clean, solid, strong, dimensionally stable and free from any adhesion-impairing substances. Fill any existing cracks in screed with structurally bonding Sopro GH 564 casting resin. Level out any gross irregularities using Sopro RAM 3 454 renovation and levelling mortar, Sopro RS 462 repair filler or Sopro SP 466 lightweight levelling mortar; for floors, use Sopro FS 15 550 floor-levelling compound or Sopro FAS 551 fibre-reinforced self-levelling filler. Cement screeds must be 28 days old and dry. Screeds incorporating Sopro Rapidur® B1 binder are ready to receive tiles after only approx. 12 hours. Calcium sulphate (anhydrite and self-levelling anhydrite) screeds should exhibit a moisture content $\leq 0.5\%$ CM and be adequately sanded, vacuum-cleaned and primed. Mastic asphalt screeds should be blinded with sand. Cement and calcium sulphate screeds incorporating heating elements should be heated up to ensure adequate drying out prior to flooring installation: required moisture content for cement screeds $\leq 2.0\%$ CM, for calcium sulphate screeds $\leq 0.3\%$ CM. Gypsum plasterwork should be dry, single-coat and must not be felt-floated or smoothed. All relevant standards, guidelines and recommendations apply; workmanship must comply with good practice.

Priming

Sopro GD 749 primer: Cement screeds, calcium sulphate (anhydrite and self-levelling anhydrite) screeds to receive tiles of size not exceeding 0.2 m², board subfloors, paperless gypsum wall panels, gypsum plasterboard/joints and filler, gypsum fibreboard, gypsum plaster, high- or variable-suction (interior) aerated concrete, cement and lime/cement render, renders made from masonry cement, flush-jointed masonry.

Sopro HPS 673 bonding primer: Smooth and closed-pore substrates, e.g. existing tile, terrazzo, natural and cast stone coverings, adhesive residue from PVC flooring or carpeting.

Sopro MGR 637 multi-purpose primer/Sopro EPG 522 epoxy primer: Calcium sulphate (anhydrite and self-levelling anhydrite) screeds to receive tiles of size exceeding 0.2 m².

Without primer: Concrete, lightweight concrete, rigid foam board, strong and uniformly absorbent mineral substrates.

¹⁾ Based on DGNB (German Sustainable Building Council) criterion 'ENV1.2 Local Environmental Impact' (version 2015).

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Application

Place water in clean mixing container, add Sopro's No.1 and mix thoroughly until a required, lumpfree, workable adhesive consistency is achieved. Water requirement is as follows:

Thin-bed consistency: 9.0–10.0 ltr (1.8–2.0 ltr) water : 25 kg (5 kg) Sopro's No.1

Medium-bed consistency: 9.0– 9.5 ltr (1.8–1.9 ltr) water : 25 kg (5 kg) Sopro's No.1

Floating-bed consistency: 11.0–11.5 ltr (2.2–2.3 ltr) water : 25 kg (5 kg) Sopro's No.1

Surface filler consistency: 9.0– 9.5 ltr (1.8–1.9 ltr) water : 25 kg (5 kg) Sopro's No.1

After 3–5 minutes maturing time, remix thoroughly.

Apply contact layer with finishing trowel, then apply combed bed with suitable notched trowel (tool angle 45°–60°). Apply only as much adhesive as can be covered by tiles during open time (30 minutes). Press tiles firmly into adhesive bed, position and align. Rake out joints prior to hardening and wash down covering. Sopro's No.1 can be applied locally in coat thicknesses up to 20 mm (for drylining/dry construction, max. 5 mm coat thickness) to even out irregularities in substrate or provide any necessary falls.

Test Certificates and Licence

Technische Universität München:

– C2 TE S1 to DIN EN 12004

– National test certificate (abP) under PG-AIV (Criteria for Award of National Test Certificates for Waterproof Membranes Used in Conjunction with Tile Coverings) for use with Sopro DSF 523 one-component flexible sealing slurry, Sopro DSF 623 one-component flexible rapid-set sealing slurry, Sopro SF 423 two-component flexible sealing slurry, Sopro TDS 823 two-component turbo sealing slurry, Sopro GD 749 primer and other Sopro components.

– National test certificate (abP) under PG-AIV (Criteria for Award of National Test Certificates for Waterproof Membranes Used in Conjunction with Tile Coverings) for use in conjunction with Sopro PU-FD 570/571 surface sealant for walls/floors, Sopro EPG 522 epoxy primer and other Sopro components – Test report: Sopro's No.1 (order no. 400) in conjunction with Sopro DSF 523 one-component flexible sealing slurry, Sopro DSF 623 one-component flexible rapid-set sealing slurry, Sopro DSF 423 two-component flexible sealing slurry, Sopro TDS 823 two-component turbo sealing slurry and Sopro GD 749 primer meets requirements to DIN EN 14891, including those for tensile adhesion strength after storage in chlorinated water.

– Test report: Sopro's No.1 (order no. 400) in conjunction with Sopro PU-FD 570 surface sealant for walls, Sopro

PU-FD 570/571 surface sealant for floors and Sopro EPG 522 epoxy primer meets requirements to DIN EN 14891, including those for tensile adhesion strength after storage in chlorinated water.

SFV e.V. institute for wall/floor coverings, Großburgwedel:

– National test certificate (abP) under PG-AIV (Criteria for Award of National Test Certificates for Waterproof Membranes Used in Conjunction with Tile Coverings) for use in conjunction with Sopro FDF 525/527 flexible sealing compound, Sopro GD 749 primer and other Sopro components.

– National test certificate (abP) based on system test under PG-AIV (Criteria for Award of National Test Certificates for Waterproof Membranes Used in Conjunction with Tile Coverings) for sheet membranes: combinations featuring Sopro AEB 640, Sopro AEB 641, Sopro AEB 642/643, Sopro AEB 644/645, Sopro AEB 112/129–133, Sopro DWF 089 with Sopro FKM XL 444 as tile adhesive and Sopro RMK 818, Sopro MKS 819 or Sopro TDS 823 as adhesive and sealing product at laps.

European technical approval:

– System component of ETA no. 13/0155 under ETAG 022 Part 1 and of ETA no. 13/0154 under ETAG 022 Part 2.

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

– Approval for shipbuilding as system component in Sopro System 2.4 (wall), MED approval no. 118.316, USCG approval no. 164.112/EC0736/118.316. Wet-applied quantity Sopro's No.1 (order no. 400): max. 2,873 g/m². 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, fully vitrified stoneware tile (min. 145 mm, thickness 5 mm), Sopro TFb high-strength tile grout. System thickness ≤ 11 mm, joints ≤ 5 mm.

– Approval for shipbuilding as system component in Sopro System 3.6 (floor), MED approval no. 124.115, USCG approval no. 164.117/EC0736/124.115. Wet-applied quantity Sopro's No.1 (order no. 400): max. 2,937 g/m². 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 walls, Sopro QS 511 coarse silica sand, fully vitrified stoneware tile (min. 145 mm, thickness 5 mm), Sopro TFb high-strength tile grout. System thickness ≤ 11 mm, joints ≤ 5 mm.

Please observe technical product information for relevant system components.

MPA Dresden (Materials Test Institute Dresden):

– Reaction to fire class A1/A1_{fl}.

The information, and, in particular, the recommendations relating to the application and end-use of SMET distributed products, are given in good faith based on SMET's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with the manufacturer'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. The manufacturer 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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Licence

EMICODE system of GEV (German Association for Control of Emissions in Products for Flooring Installation): EC1^{PLUS} R ('very-low-emission-plus') rating.

Storage

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

Disposal Considerations

Waste treatment methods. Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. 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 07. Disposal of not hardened product (EC waste code) : 17 01 06*. 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.

Safety

Classification of the substance or mixture EC regulation criteria 1272/2008 (CLP).

Warning, Skin Irrit. 2, Causes skin irritation.

Danger, Eye Dam. 1, Causes serious eye damage.

Warning, STOT SE 3, May cause respiratory irritation.

Adverse physicochemical, human health and environmental effects: No other hazards.

Labelling in accordance with Regulation (EC) No 1272/2008 (CLP) **GHS05, GHS07. Signal word: Danger**

Contains Portland cement and calcium formate. Contains complex mixture of calcium and magnesium silicates and aluminates. Exhibits strong alkaline reaction upon contact with moisture/water; protection required for skin and eyes. All standard precautions for the handling of construction materials/chemical must be taken. See Sopro Material Safety Datasheet for further detailed safety information.

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): ZP 1 · Low-chromate to Regulation (EC) No 1907/2006, Annex XVII

German Water Hazard Class (WGK): WGK 1: slightly hazardous to water (self-assessment in accordance with VwVwS – German Administrative Regulations on the Classification of Substances Hazardous to Waters into Water Hazard Classes – of 17.05.1999)

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Technical Information

Mixing Ratio	Thin-bed consistency: 9.0 – 10.0 ltr (1.8 – 2.0 ltr) water : 25 kg (5 kg) Sopro's No.1 Medium-bed consistency: 9.0 – 9.5 ltr (1.8 – 1.9 ltr) water : 25 kg (5 kg) Sopro's No.1 Floating-bed consistency: 11.0 – 11.5 ltr (2.2 – 2.3 ltr) water : 25 kg (5 kg) Sopro's No.1 Surface filler consistency: 9.0 – 9.5 ltr (1.8 – 1.9 ltr) water : 25 kg (5 kg) Sopro's No.1
Coverage	Approx. 1.0 kg/m ² per mm coat thickness
Maturing Time	3 - 5 minutes
Working Life	3 - 4 hours; stiffened mortar must not be retempered by addition of water or fresh mortar to restore workability.
Open Time	Approx. 30 mins
Walkable / Groutable	After approx. 12 hours or after setting of adhesive; take measures to spread loads over floor.
Loading	After approx. 3 days; in commercial facilities after approx. 14 days in areas subject to high wet exposure after approx. 7 days for underwater applications after approx. 21 days in conjunction with wall and floor heating after approx. 14 days.
Specified Times	Apply for normal temperature range of +23°C and 50% relative humidity; higher temperatures shorten and lower temperatures lengthen these times
Application Temperature	Between +5 °C and max. +30 °C; use of a rapid-set Sopro thin-bed adhesive is recommended for external areas during cold season.
Tools/ Tool Cleaning	Mixing attachment, notched trowel with suitable serration (tooth size up to 12 mm); wash tools with water immediately after use.
Packaging	25kg & 5 kg bag

	<p align="center">Sopro Bauchemie GmbH Biebricher Straße 74 · 65203 Wiesbaden (Germany) 1211 0767</p>
	<p align="center">04 CPR-DE3/0400.1.eng EN 12 004:2007 + A1:2012 Sopro's No.1 400 Improved cementitious adhesive for indoor and outdoor wall and floor tiling</p>
Reaction To Fire Bond Strength as: Initial tensile adhesion strength Durability for: Tensile adhesion strength after water immersion Tensile adhesion strength after heat ageing Tensile adhesion strength after freeze-thaw cycles Release of dangerous substances	<p align="right">Class A1/A1_{fl}</p> <p align="right">≥ 1.0 N/mm²</p> <p align="right">≥ 1.0 N/mm²</p> <p align="right">≥ 1.0 N/mm²</p> <p align="right">≥ 1.0 N/mm²</p> <p align="right">≥ 1.0 N/mm²</p> <p align="right">See MSDS</p>

*NPD = No Performance Determined




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