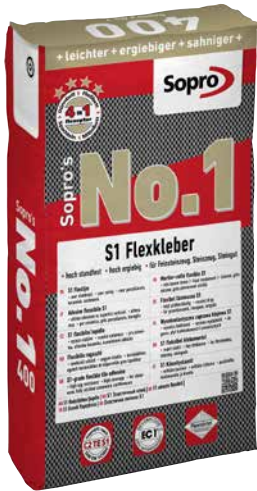


Order-No.
400

Sopro's No.1

Flexible tile adhesive



Highly deformable, cementitious, highly polymer-modified, S1-grade, flexible tile adhesive, meeting C2 TE S1 requirements to DIN EN 12004, for installation of ceramic tiles, discoloration-resistant natural stone units and terracotta; also for underwater applications, e.g. in swimming pools and process water containers. Suitable for use in conjunction with wall and floor heating, waterproof membranes and for fully vitrified stoneware. Very high coverage and excellent workability. Also for tile-on-tile applications. With 4-in-1 formulation for thin-, floating- and medium-bed application, and for filling smaller areas with max. 20 mm coat thickness.

- For walls and floors, indoors and outdoors
- C2: tensile adhesion strength $\geq 1.0 \text{ N/mm}^2$
- T: thixotropic – high sag resistance due to fibre reinforcement
- E: extended open time ≥ 30 minutes
- S1: deformability $\geq 2.5 \text{ mm}$
- Universal application: thin-bed, floating-bed and medium-bed laying; filler coats of up to 20 mm thickness
- System component of Sopro eScann® system
- Approved as system component for shipbuilding applications
- Low-chromate to Regulation (EC) No 1907/2006, Annex XVII
- DGNB (German Sustainable Building Council): Top quality level 4, Line 8¹⁾
- Recommended by Sentinel Haus Institut

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 and mastic asphalt screeds, 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, Sopro PU-FD 570/571 surface sealant for walls/floors or Sopro AEB® waterproof sheet membranes.

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

Maturing time

3–5 minutes

Working life

3–4 hours; stiffened mortar shall not be retempered by addition of water or fresh mortar to restore workability.

Open time

Approx. 30 minutes

Walkable/groutable

After approx. 12 hours or after setting of adhesive; take measures to spread loads over floor.

¹⁾ For drylining/dry construction and mastic asphalt screeds, max. 5 mm coat thickness.

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

Loadable

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.

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.

Coverage

Approx. 1.0 kg/m² per mm coat thickness

Shelf life

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

Packaging

25 kg bag, 5 kg bag

Substrate preparation

Substrate shall 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, Sopro VS 582 self-levelling filler or Sopro FAS 551 fibre-reinforced self-levelling filler. Cement screeds shall be 28 days old and dry. Screeds incorporating Sopro Rapidur® B1 turbo rapid-set binder are ready for tiling after only 6 – 12 hours. Unheated calcium sulphate (anhydrite and self-levelling anhydrite) screeds shall exhibit a moisture content ≤ 0.5% CM and be adequately ground, vacuum-cleaned and primed. Mastic asphalt screeds shall be blinded with sand. Cement and calcium sulphate screeds incorporating heating elements shall be heated up to ensure adequate drying out prior to flooring installation: required moisture content for cement screeds ≤ 2.0% CM, for calcium sulphate screeds ≤ 0.3% CM. Gypsum plasterwork shall be dry, single-coat and shall not be felt-floated or smoothed. All relevant standards, guidelines and recommendations shall apply; workmanship shall 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 SG 602 primer-sealer: Cement render, lime/cement render, gypsum plaster, homogeneous, flush-jointed masonry (no composite masonry), concrete, aerated concrete, paperless gypsum panels, gypsum plasterboard and gypsum fibreboard, cement screeds, calcium sulphate screeds (for laying tiles up to max. 1 m²). For ceramic tiles, natural stone and timber substrates insensitive to moisture. For large-format tiles (of size > 0.36 m²), use of rapid-set, rapid-drying bedding adhesives is recommended in conjunction with Sopro SG 602.

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.

Application

Place water in clean mixing container, add Sopro's No.1 and mix thoroughly until required, lump-free, 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.

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, notched trowel with suitable serration (tooth size up to 12 mm); wash tools with water immediately after use.

Test certificates, test reports and licences

PG-AIV-F (Criteria for Award of National Test Certificates for Liquid-Applied Waterproof Membranes Used in Conjunction with Tile Coverings):

National test certificate (abP) for composite waterproofing systems with membrane and tile finish, for structural waterproofing in conjunction with DSF 523, DSF RS 623, DSF 423, TDS 823, FDF 525/527, PU-FD 570/571 and other Sopro components.

PG-AIV-B (Criteria for Award of National Test Certificates for Waterproof Sheet Membranes Used in Conjunction with Tile Coverings):

National test certificate (abP) for composite waterproofing systems with membrane and tile finish, for structural waterproofing in conjunction with AEB 640, AEB plus 639 and other Sopro components.

DIN EN 14891:

Sopro's No.1 (order no. 400) in conjunction with DSF 423, DSF 523, DSF RS 623, TDS 823 and GD 749 meets requirements, including those for tensile adhesion strength after storage in chlorinated water

DIN EN 14891:

Sopro's No.1 (order no. 400) in conjunction with PU-FD 570/571 and EPG 522 meets requirements, including those for tensile adhesion strength after storage in chlorinated water

ETAG:

European technical approval (ETA): 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 with EPG 522, QS 507, PU-FD 570/571, QS 511 and TFb: MED approval no. 118.316 (wall) and 124.115 (floor), USCG approval no. 64.112/EC0736/118.316 (wall) and 164.117/EC0736/124.115 (floor)

DIN EN 13501-1:

Reaction to fire class A1/A1_{f1}.

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

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

GHS05, GHS07

Signal word: Danger

Contains Portland cement, Cr (VI) < 2 ppm. Contains 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/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): ZP 1 - Low-chromate to Regulation (EC) No 1907/2006, Annex XVII

Safety precautions

CE marking

 1211 0767	 Sopro Sopro Bauchemie GmbH Biebricher Straße 74 – 65203 Wiesbaden (Germany) www.sopro.com
04 CPR-DE3/0400.1.eng EN 12 004:2007 + A1:2012 Sopro's No.1 400 Improved deformable cementitious adhesive with reduced slip and extended open time for tiling internal and external floors and walls	
Reaction to fire	Class A1/A1 _{f1}
Bond strength as:	
Initial tensile adhesion strength	≥ 1.0 N/mm ²
Durability for:	
Tensile adhesion strength after water immersion	≥ 1.0 N/mm ²
Tensile adhesion strength after heat ageing	≥ 1.0 N/mm ²
Tensile adhesion strength after freeze-thaw cycles	≥ 1.0 N/mm ²

Please observe the current version of the product information, the currently valid declaration of performance under the EU Construction Products Regulation, and the latest version of the relevant safety data sheet to EC Regulation No 1907/2006, also available from the internet at www.sopro.com! This document serves as a product description and sets out general details, based on empirical and test data, that take no account of specific cases of application. No liability may be construed and no claims shall be accepted in respect of these details. Should you require assistance, please contact our Technical Counselling Service.

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