

## Sopro VF 419 - VarioFlex® Silver Large-Format Flexible Tile Adhesive

A silver-grey, highly flexible, high-coverage, extra-rapid-set, cementitious thin, medium and floating-bed tile adhesive for efficient laying of tiles and discoloration-sensitive natural stone units with full rear-face wetting using floating method. Particularly suitable for large-format units and also on calcium sulphate screeds. With high crystalline water binding capacity. Low-chromate to Regulation (EC) No 1907/2006, Annex XVII.

- Early high strength, walkable and groutable after only approx. 3 hours
- Meeting C2 EF S1 requirements to DIN EN 12 004
- Silver-grey adhesive colour, also suitable for light-coloured, translucent natural stone types
- For deformation-sensitive tiles
- For large-format units
- Extended open time  $\geq$  30 minutes
- Ideal for use in conjunction with tile levelling systems
- Consistency adjustable for thin, medium- and floating-bed laying
- For floors, indoors and outdoors
- 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
- DGNB (German Sustainable Building Council): Top quality level 4, Line 8\*
- CE Marked

### Field Of Application

Stoneware and fully vitrified stoneware tiles, clinker floor tiles, mosaic, light-coloured, discoloration-sensitive and translucent natural stone units, cast stone units, terracotta, dishing-prone, resin-bonded tiles, e.g. agglomerate tiles. Particularly suitable for large-format fully vitrified stoneware units. For fast-track refurbishment/renovation on tightly scheduled projects. For use in private housing as well as in commercial and industrial facilities subject to high mechanical loads.

### Suitable Substrates

Concrete, min. 3 months old; cement screeds; calcium sulphate screeds; mastic asphalt screeds (indoors); board subfloors; heated floor constructions (cement and anhydrite screeds); strong existing ceramic, natural stone, terrazzo and cast stone coverings. Waterproof membranes using Sopro FDF flexible sealing compound, Sopro DSF 523 one-component flexible sealing slurry, Sopro SF 623 one-component flexible rapid-set sealing slurry, Sopro DSF 423 two-component flexible sealing slurry or Sopro TDS 823 two-component turbo sealing slurry.

### Properties

Silver-grey, highly flexible, high-coverage, extra-rapid-set, highly polymer-modified, cementitious thin, medium- and floating-bed tile adhesive meeting C2 EF S1 requirements to DIN EN 12004, with original Rhenish trass. For installation of ceramic floor coverings, in particular for discoloration-sensitive and/or translucent natural stone tiles, on all substrates. Suitable for large-format fully vitrified stoneware. Ideal for large-format fully vitrified stoneware due to its rapid-set properties in conjunction with a nonetheless long open time. Rapid-set properties make it ideal for fast-track or tightly scheduled projects where rapid reuse of floorspace is required. With high crystalline water binding capacity.

### Substrate Preparation

Substrate should 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 FS 15 550 floor-levelling compound, Sopro AFS 561 anhydrite floor-levelling compound or Sopro FAS 551 fibre-reinforced self-levelling filler. On balconies and patios, use Sopro RAM 3 454 renovation and levelling mortar to create falls (where absent) and waterproof as required (e.g. using Sopro TDS 823 two-component turbo sealing slurry, Sopro DSF 523 one-component flexible sealing slurry or Sopro AEB plus 639 waterproofing and separating membrane). Cement screeds should be 28 days old and dry. Screeds incorporating Sopro Rapidur® B1 rapid-set binder are ready to receive tiles after only 12 hours. Calcium sulphate (anhydrite and self-levelling anhydrite) screeds should exhibit a moisture content  $\leq$  0.5% CM and be adequately ground, 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 should not be felt-floated or smoothed. All relevant standards, guidelines and recommendations apply; workmanship must comply with good practice.

### Priming

**Sopro GD 749 primer:** High- or variable-suction substrates; cement screeds, calcium sulphate (anhydrite and self-levelling anhydrite) screeds for tile formats  $<$  1.0 m<sup>2</sup>, board subfloors.

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

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### Priming (continued)

**Sopro HPS 673 special primer:** Smooth and closed-pore substrates, e.g. existing tile, terrazzo, natural and cast stone coverings, adhesive residue from PVC flooring or carpeting; mastic asphalt screeds without sand blinding.

**Sopro MGR 637 multi-purpose primer/Sopro EPG 522 epoxy primer:** Calcium sulphate (anhydrite and self-levelling anhydrite) screeds for tile formats  $\geq 1.0 \text{ m}^2$ .

**Without primer:** Sufficiently strong concrete; solid, uniformly absorbent mineral substrates.

### Application

Depending on required consistency, fill clean container with 5.5–6.0 ltr (thin-bed adhesive), 5.0–5.5 ltr (medium-bed adhesive) or 6.5–7.5 ltr (floating-bed adhesive) water, add 25 kg Sopro VF 419 and mix mechanically using mixing attachment to achieve lump-free consistency. After 3–5 minutes maturing time, remix thoroughly. Apply contact layer with finishing trowel, then apply combed bed with suitable notched trowel (tool angle  $60^\circ$ ). Apply only as much adhesive as can be covered by tiles during open time. Press tiles firmly into adhesive bed, position and align. Rake out joints prior to hardening and wash down covering. Use buttering/floating method for laying large-format units.

### Note

Particularly when using tile levelling systems, adopt buttering/floating method for laying large-format units. When using tile levelling systems, substrate must be properly level and suitably pretreated.

### Storage

Approx. 6 months, subject to storage on pallet in dry conditions in original unopened containers.

### Test Certificates & Licence

**Kiwa GmbH Polymer Institut:** – C2 EF S1 to DIN EN 12004.

**SFV e.V. institute for wall/floor coverings, Großburgwedel:** – 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 EB 644/645, Sopro AEB

112/129–133, Sopro DWF 089 with Sopro VF 419 as tile adhesive and Sopro RMK 818, Sopro MKS 819 or Sopro TDS 823 as adhesive and sealing product at laps.

**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.

### Disposal Considerations

13.1. 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.

### Safety

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

Contains 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/chemical are to be taken. See Sopro Material Safety Datasheet for further detailed safety information.

### Labelling

#### Hazard statements:

H318 Causes serious eye damage.

#### 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.

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### Technical Information

Colour	Silver Grey
Mixing Ratio (water only)	Thin-bed adhesive: 5.5–6.0 ltr water : 25 kg Sopro VF 419 Medium-bed adhesive: 5.0–5.5 ltr water : 25 kg Sopro VF 419 Floating-bed adhesive: 6.5–7.5 ltr water : 25 kg Sopro VF 419
Coverage	Approx. 1.3 kg/m <sup>2</sup> per mm coat thickness
Maturing Time	3-5 minutes
Pot Life	30–45 minutes depending on consistency; stiffened mortar shall not be retempered by addition of water or fresh mortar to restore workability.
Open Time	Approx. 30 mins
Walkable / Groutable	After approx. 3 hours or after setting of adhesive; take measures to spread loads over floor.
Loading	After approx. 5 hours In commercial facilities - After approx. 2 days In areas subject to high wet exposure - After approx. 3 days For underwater applications - After approx. 10 days In conjunction with 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. +25°C
Tools/ Tool Cleaning	Mixing attachment, notched trowel with suitable serration, medium-bed trowel; tile levelling systems, e.g. manufactured by Karl Dahm; wash tools with water immediately after use.
Packaging	25kg bag

	<p align="center"><b>Sopro Bauchemie GmbH</b>  <b>Biebricher Straße 74 · 65203 Wiesbaden (Germany)</b>  <b>1119</b>  <b>0767</b></p>
	<p align="center">16  CPR-DE3/419-25.1.eng  EN 12 004:2007 + A1:2012  Sopro Sopro VF 419-25</p> <p>Improved, fast setting, cementitious adhesive for tiling internal and external floors</p>
<b>Reaction To Fire</b>	<b>Class A<sub>2</sub><sub>n</sub> -s1</b>
<b>Bond Strength as:</b>	
<b>Early tensile adhesion strength</b>	<b>≥ 0.5 N/mm<sup>2</sup></b>
<b>Tensile adhesion strength after dry storage</b>	<b>≥ 1.0 N/mm<sup>2</sup></b>
<b>Durability for:</b>	
<b>Tensile adhesion strength after water immersion</b>	<b>≥ 1.0 N/mm<sup>2</sup></b>
<b>Tensile adhesion strength after heat ageing</b>	<b>≥ 1.0 N/mm<sup>2</sup></b>
<b>Tensile adhesion strength after freeze-thaw cycles</b>	<b>≥ 1.0 N/mm<sup>2</sup></b>
<b>Release of dangerous substances</b>	<b>See MSDS</b>

