

Order-No.  
**640**

# Sopro AEB 640

Waterproofing and separating membrane and system products



Thin, crack-bridging waterproof sheet for use as reliable, quick-to-install, flexible waterproof membrane and separating layer below ceramic tiling to DIN 18534 Part 5.

- For walls and floors, indoors
- Water-impermeable separating layer
- Flexible and crack-bridging
- Ready-to-use and tear-resistant
- Alkali- and surfactant-resistant
- Ageing-resistant and rotproof
- Rapid, straightforward application
- Resistant to microorganisms
- With printed scale to simplify cutting
- DGNB (German Sustainable Building Council): Top quality level 4, Line 9, based on DGNB criterion "ENV1.2 Local Environmental Impact" (2015 version)

## Use

For installation of waterproof sheet membranes indoors, for water action classes W0-I to W2-I to DIN 18534 and solutions based on W3-I; also for chemical loads in all water action classes (equivalent to Moisture Exposure Classes A and C to DIBt Construction Products List and A0 to ZDB (Federation of the German Construction Industry) data sheet).

As separating layer system for tile installation indoors, for Category EK-W-AIV, EK-G-AIV and EK-H-AIV (timber substrates in conjunction with Sopro VS 582 self-levelling filler) to ZDB (Federation of the German Construction Industry)/euroFEN guidance paper. **Particularly suitable for fast-track waterproofing on tightly scheduled construction schemes and refurbishment projects.**

## Suitable substrates

Concrete and lightweight concrete, min. 3 months old; cement screeds; calcium sulphate (anhydrite and self-levelling anhydrite) screeds; mastic asphalt screeds; board subfloors; heated 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); masonry cement; cement render; lime/cement render; gypsum plaster; rigid foam board.

## Material

Tear-resistant polypropylene sheet with special polypropylene nonwoven facing on either side.

## Thickness

Approx. 0.4 mm

## Weight

Approx. 250 g/m<sup>2</sup>

## Application temperature

Between +5°C and +30°C

## Coverage

Abdichtungsbahn: 1,00–1,05 m<sup>2</sup>/m<sup>2</sup>

## Stoß- und Überlappungskleber:

Use	FDK 415	TDS 823	RMK 818	MKS 819
Bonding of waterproof sheet membranes (over full surface)	0,5–0,9 kg/m <sup>2</sup>	–	–	–
Bonding at laps (6 cm)	35–55 g/lfdm	70–100 g/lfdm	30–40 g/lfdm	35–45 g/lfdm
Bonding at joints with sealing tape (14 cm)	80–120 g/lfdm	180–240 g/lfdm	70–95 g/lfdm	80–105 g/lfdm

## Application of Sopro AEB 640 with Sopro FDK 415



1 Pretreat absorbent substrates with Sopro GD 749 primer.



2 Place liquid Component B in container, add full quantity of powder Component A and mix mechanically to lump-free consistency.



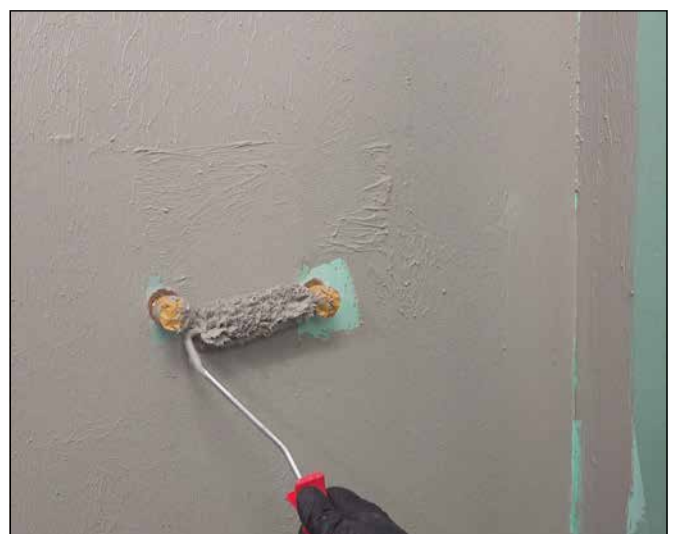
3 Use lambswool roller to speed up application.



4 Roller apply Sopro FDK 415 over full surface.



5 To achieve uniform, full-cover coat, work crosswise when applying Sopro FDK 415.



6 At penetrations or cramped locations, apply material with smaller roller or brush.



**7** Embed accurately cut-to-size Sopro AEB 640 waterproofing and separating membrane in fresh adhesive coat and press down firmly to smooth, working outwards from centre.



**8** Overcoat approx. 5 cm laps between Sopro AEB 640 sheets with Sopro FDK 415.



**9** Overcoat Sopro AEB 640 sheet terminations with Sopro FDK 415.



**10** Tape over joints in Sopro AEB 640 membrane with Sopro AEB 148 flexible sealing tape.



**11** Embed accurately cut-to-size Sopro AEB 148 tape in fresh adhesive coat and press down firmly.



**12** Likewise overcoat ends of Sopro AEB 148 tape sheet with Sopro FDK 415.

### Shelf life

In original unopened packaging in cool, dry conditions. Do not stack pallets. Protect from frost, moisture and direct sunlight prior to application.

### Packaging

640-01 Box with 30 m roll (100 cm wide)  
640-02 Box with 10 m roll (100 cm wide)  
640-03 Sheet packaging with 30 m roll (150 cm wide)  
641-30 Box with 25 m roll (30 cm wide)

### Properties

Sopro AEB 640 is a flexible, thin-sheet, crack-bridging polypropylene waterproofing and separating membrane, faced either side with special polypropylene nonwoven fabric. Nonwoven fabric ensures strong bond between waterproofing/separating membrane and cementitious tile adhesive. Not suitable as a substrate for dishing/curling-prone covering materials.

### Substrate preparation

Substrate preparation shall comply with DIN 18534 Part 5. Substrate shall be level, clean, solid, strong, dimensionally stable and free from any adhesion-impairing substances. Isolated cracks in screed pose no problem provided crack edges are level and screed is not susceptible to upward or downward deflection (e.g. lifting, warping or curling). Where necessary, existing cracks in screed shall be filled with structurally bonding Sopro GH 564 casting resin.

Use Sopro RAM 3 454 renovation and levelling mortar, Sopro AMT 468 levelling mortar with trass or Sopro SP 466 lightweight levelling mortar to level out any gross irregularities and to create falls. Cement screeds shall be 28 days old and dry. Calcium sulphate (anhydrite and self-levelling anhydrite) screeds shall exhibit a moisture content  $\leq 0.5\%$  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 bonding: required moisture content for cement screeds  $\leq 2.0\%$  CM, for calcium sulphate screeds  $\leq 0.3\%$  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 for tile adhesives

**Sopro GD 749 primer:** Cement screeds, calcium sulphate (anhydrite and self-levelling anhydrite) screeds, board subfloors; paperless gypsum wall panels, gypsum plasterboard/joints and filler, gypsum fibreboard, gypsum plaster; high- or variable-suction aerated concrete; cement and lime/cement render; 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.

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

Please observe technical product information for relevant Sopro primers!

### Application

Cut Sopro AEB 640 sheet to required size. Use notched trowel (with 3 mm or 4 mm serration) to comb on system-tested tile adhesive or use roller (alternatively, brush or trowel) to apply Sopro FDK 415 fixing and waterproofing adhesive to strong, properly prepared substrate. Ensure that adhesive is applied over width approx. 10 cm greater than sheet width. Place accurately sized lengths of membrane in fresh adhesive so as to ensure full bonding. Run straight edge of notched trowel or finishing trowel over sheet, pressing down to remove any entrapped air below sheet. When smoothing down sheet, recommended procedure is to work outwards from centre to edges.

At joints between sheets, either fix adjacent sheets with 6 cm lap and watertightly bond using system-tested joint adhesive or fix with adjacent sheets butted together. In latter case, tape over joints with Sopro AEB 641 sealing tape in conjunction with system-tested joint and overlap adhesive to ensure watertight seal. When turning corners, membrane can be carried beyond corner provided a 5 cm lap can be guaranteed. If sheets are butted at corners, tape over joints with watertightly bonded Sopro AEB 641 sealing tape. Pipe penetrations shall be waterproofed using Sopro AEB 644 wall collars. Push flexible expansion zone of collar over penetrating element and fully bond to previously installed membrane with min. 5 cm lap using system-tested joint and overlap adhesive to ensure watertight seal. Floor drains with a minimum flange width of 5 cm shall – in line with DIN 18 534 Part 5 – be waterproofed using Sopro AEB 645 floor collars. Watertightly bond floor collar to floor drain flange. Cut out hole to waste pipe diameter and fully bond floor collar. At perimeter and movement joints, place Sopro AEB 641 sealing tape with central fold over joint and fully bond on either side of joint. No fold needs to be formed if Sopro AEB 1176 (pre-folded) flexible sealing tape is used. Provide min. 5 cm laps and carefully bond with system-tested joint and overlap adhesive to ensure watertight seal. At internal and external angles, install Sopro AEB 642/643 sealing tape for internal/external angles. All incorporated Sopro AEB 641 sealing tape, Sopro AEB 642/643 sealing tape for internal/external angles, Sopro AEB 644/645 wall/floor collars, Sopro AEB 176/177 vertical make-up pieces and Sopro bath/shower sealing system shall be fully bonded, with all voids eliminated. Apply joint adhesive to substrate and spread over surface using finely notched spatula.

**Note on bonding at joints:** A reactive, two-component Sopro sealing slurry (e.g. Sopro TDS 823 two-component turbo sealing slurry), Sopro DSF 623 flexible RS sealing slurry, Sopro FDK 415 fixing and waterproofing adhesive or MS polymer-based Sopro sealing adhesive (e.g. Sopro RMK 818 Racofix® universal adhesive) should be used to bond sealing tape and fittings.

**All suitable Sopro products for standards-compliant application are listed under "Test certificates". Please observe technical product information for relevant system products!**

**Tools**

Scissors, utility knife, notched trowel, finishing trowel, cranked-handle trowel, finely notched spatula

**Test certificates, test reports and licences**

**PG-AIV-B:**

National test certificate (abP) for composite waterproofing systems with membrane and tile finish, for structural waterproofing in conjunction with:

Sealing tape: AEB 641, AEB 148;

Sealing tape for angles: AEB 642, AEB 643;

Sealing collars: AEB 129, AEB 130, AEB 112, AEB 133, AEB 131, AEB 132, AEB 645, DWF 089, DMB 091;

Bonding of sheets: FDK 415;

Bonding at side/end joints: RMK 818, MKS 819, TDS 823, FDK 415;

Tile adhesive (also for bonding sheets): Sopro's No.1 (order no. 400), Sopro's No.1 Silver (order no. 403), Sopro's No.1 rapid-set (order no. 404), Sopro's No.1 white rapid-set (order no. 997), FKM XL 444, FKM 600, VF 419, FF 450;.

EC1<sup>PLUS</sup> ("very-low-emission-plus") rating

**ETAG:**

European technical approval (ETA): ETA no. 13/0154 under ETAG 022 Part 2;

Reaction to fire class: E/Efl. In conjunction with:

Sealing tape: Sopro AEB 641;

Sealing tape for angles: Sopro AEB 642, AEB 643;

Sealing collars: Sopro AEB 129, AEB 130, AEB 112, AEB 133, AEB 131, AEB 132, AEB 645;

Bonding at joints between sheets: Sopro MKS 819;

Tile adhesives: Sopro's No.1 (order no. 400), Sopro's No.1 rapid-set (order no. 404), Sopro FKM XL 444, SC 808;

Primer: Sopro GD 749 and other Sopro system components.



**EMICODE (system of GEV):**

EC1<sup>PLUS</sup> ("very-low-emission-plus") rating

All standard precautions for the handling of construction materials/chemicals shall be taken.

**Safety precautions**

**CE marking**

 <b>0921/0527</b> <b>0764</b>	 <b>Sopro</b> Bauchemie GmbH Biebricher Straße 74 – 65203 Wiesbaden (Germany) www.sopro.com
13 CPR-DE3/0640.3.eng Sopro AEB 640 ETA-13/0154 – ETAG 022:2010 Part 2 Watertight covering kits for wet room floors and/or walls Kits based on flexible sheets	
Reaction to fire	Class E/E <sub>fl</sub>
Vapour permeability	s <sub>d</sub> = 51.1 m
Watertightness	watertight
Crack-bridging ability	0.75 mm
Bond strength	Asst. cat. 1: > 0.2 N/mm <sup>2</sup> Asst. cat. 2: > 0.3 N/mm <sup>2</sup>
Scratching resistance	NPD
Joint-bridging ability	watertight
Watertightness around penetrations	watertight
Joint strength	261 N/50 mm machine direction 209 N/50 mm transverse direction
Flexibility	no cracks or crazing
Dimensional stability	-0.55 % machine direction +0.31 % transverse direction
Resistance to temperature	pass
Resistance to water	Asst. cat. 1: > 0.2 N/mm <sup>2</sup> Asst. cat. 2: > 0.3 N/mm <sup>2</sup>
Resistance to alkalinity	pass
Reparability	repairable
Thickness	0.375 mm
Applicability	applicable
Release of dangerous substances	see SDS

## System products



### Sopro AEB 641 sealing tape

Sealing tape, faced either side with special nonwoven fabric, for reliable, waterproof taping of joints in Sopro waterproof sheet membranes. For forming junctions between waterproof membrane and balcony edge sections or other components.

Thickness: Approx. 0.4 mm  
Packaging: Box with 25 m roll (120 mm wide),  
box with 25 m roll (300 mm wide)



### Sopro AEB 148 flexible sealing tape

Flexible sealing tape, faced either side with special nonwoven fabric, for trouble-free, flexible bridging and waterproofing of perimeter and movement joints. For use in conjunction with Sopro liquid-applied waterproofing materials and waterproof sheet membranes below ceramic and natural stone tiling.

Packaging: 50 m roll (120 mm wide)  
10 m roll (120 mm wide)



### Sopro AEB 1176 flexible sealing tape with fold

Flexible sealing tape with fold, faced either side with special nonwoven fabric, for trouble-free, flexible bridging and waterproofing of perimeter and movement joints below ceramic and natural stone tiling.

Packaging: 50 m roll (120 mm wide)  
10 m roll (120 mm wide)



### Sopro AEB 642/643 sealing tape for internal/external angles

Preformed internal or external angle for reliable, flexible bridging and waterproofing of perimeter and movement joints at internal and external angles.

Installed in conjunction with Sopro AEB 641 sealing tape.

Size: AEB 642: approx. 120 x 120 mm  
AEB 643: approx. 110 x 110 mm

Thickness: Approx. 0.3 mm

Packaging: As single items



### Sopro AEB 176/177 vertical make-up piece left/right

Preformed, flexible make-up pieces for reliable sealing at corners of screeds laid to falls in walk-in showers. Installed in conjunction with Sopro AEB 641 sealing tape. For left- and right-hand corners of screeds laid to falls, in standard heights of 20 mm and 28 mm.

Packaging	Height 20 mm	Height 28 mm
Piece (left)	Order no. 176-20	Order no. 176-28
Piece (right)	Order no. 177-20	Order no. 177-28



### Sopro AEB 645 floor collar

Polypropylene floor collar, faced either side with special nonwoven fabric, for use in conjunction with Sopro AEB 640/Sopro AEB plus 639 waterproofing and separating membranes for reliable sealing of floor drains/gullies below ceramic and natural stone tiling.

Thickness: Approx. 0.4 mm

Size: 450 x 450 mm

Packaging: As single items

## System products

Wall collars, faced either side with special nonwoven fabric, for reliable sealing of all standard pipe penetrations below ceramic and natural stone coverings.



### Sopro AEB 129 wall collar

Size: Approx. 150 x 150 mm

Packaging: As single items

For sealing pipe penetrations with diameter of 10–30 mm.



### Sopro AEB 130 wall collar

Size: Approx. 170 x 170 mm

Packaging: As single items

For sealing pipe penetrations with diameter of 32–55 mm.



### Sopro AEB 112 wall collar

Size: Approx. 200 x 200 mm

Packaging: As single items

For sealing pipe penetrations with diameter of 50–75 mm.



### Sopro AEB 131 wall collar, 40 mm (double-punched)

Size: Approx. 175 x 140 mm

Distance between hole centres: 40 mm

Packaging: As single items

For sealing pipe penetrations with diameter of 10–16 mm for both pipes.



### Sopro AEB 132 wall collar, 150 mm (double-punched)

Size: Approx. 300 x 150 mm

Distance between hole centres: 150 mm

Packaging: As single items

For sealing pipe penetrations with diameter of 10–30 for both pipes.



### Sopro AEB 133 wall collar

Size: Approx. 250 x 250 mm

Packaging: As single items

For sealing pipe penetrations with diameter of 75–128 mm.

## System products



### Sopro FDK 415 fixing and waterproofing adhesive

Roller- and brush-applied, two-component, cementitious reactive adhesive for fixing and bonding Sopro waterproof sheet membranes on all standard substrates and for waterproof bonding at joints and laps in Sopro sealing tapes, sealing collars and other fittings.

Packaging: 6.65 kg combi pack  
19.95 kg combi pack



### Sopro TDS 823 two-component turbo sealing slurry

Flexible, rapid-set, two-component, cementitious sealing slurry for waterproof bonding and sealing at joints and junctions in Sopro AEB 640/Sopro AEB plus 639 waterproofing and separating membranes, and for bonding Sopro AEB 641 sealing tape, Sopro AEB 642/643 sealing tape for internal/external angles and Sopro AEB 644/645 wall/floor collars.

Packaging: 10 kg bag (powder Component A) and 10 kg canister (liquid Component B);  
4.5 kg bag (powder Component A) and 4.5 kg canister (liquid Component B)  
9 kg combi pack  
20 kg combi pack



### Sopro RMK 818 Racofix® universal adhesive

Water-resistant, one-component universal adhesive for waterproof bonding and sealing at joints and junctions in Sopro AEB 640/Sopro AEB plus 639 waterproofing and separating membranes, and for bonding Sopro AEB 641 sealing tape, Sopro AEB 642/643 sealing tape for internal/external angles and Sopro AEB 644/645 wall/floor collars.

Packaging: 431 g cartridge (Nr 12 in box)



### Sopro MKS 819 Racofix® universal adhesive S

Highly flexible, ready-to-use, solvent-free, polymer-based, one-component universal waterproof membrane. For waterproof bonding at joints and junctions in Sopro waterproof sheet membranes and for waterproof bonding of Sopro sealing tapes, sealing angles, make-up pieces, wall/floor collars and bath/shower sealing system.

Packaging: 1 kg pot  
438 g cartridge

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. The latest version of this product information as well as the relevant safety data sheet to EC Regulation No. 1907/2006 are available at [www.sopro.com](http://www.sopro.com)

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