

ZR 618 Turbo MAXX

Reactive, bitumen-free, two-component waterproof membrane

ZR 618



Flexible, high-coverage, quick-drying, two-component mineral sealing slurry. For waterproofing normal, recessed and access balconies to DIN 18531 Part 5, for waterproofing elements in contact with soil to DIN 18533 and for waterproofing tanks and pools to DIN 18535.

- For walls and floors, indoors and outdoors
- Rainproof after only approx. 2,5 hours
- Highly flexible, crack-bridging after only approx. 6 hours
- Backfilling possible after only approx. 6 hours
- Also suitable for application to cold and slightly damp substrates
- Radon-proof, water-vapour-permeable, UV-resistant, overcoatable and suitable as plastering/rendering background
- Sag-resistant, extra-creamy workability
- Visual drying control through colour change
- For brush, roller, trowel and spray application
- Low-chromate to Regulation (EC) No 1907/2006, Annex XVII
- For healthy living: Recommended by Sentinel Haus Institut

Coverage: Approx. 1.2 kg/m²/mm dry coat thickness



Packaging		Packages	Pallet weight
Combination container	12 kg	30	360 kg
Combination container	24 kg	18	432 kg

Use

For waterproofing elements in contact with soil to DIN 18533 for water action classes W1-E and W4-E (crack class R1-E and space use classes RN1-E to RN2-E, crack class R2-E substrates as so-called "special", i.e. non-standardized, construction); based on water action classes W2.1-E "Moderate water pressure action" and W3-E "Water without hydrostatic pressure acting on buried suspended slabs". Also suitable as contact layer on existing bitumen and tar pitch waterproofings prior to application of Sopro bituminous thick coatings. Suitable for waterproofing in case of rear-face water action to elements in contact with soil. Suitable as radon barrier (building radon protection).

For waterproofing normal, recessed and access balconies to DIN 18 531 Part 5.

For installation of waterproof membranes indoors (e.g. in showers, washrooms, toilets) to DIN 18534 Part 3 for water action classes W0-I "Low", W1-I "Moderate", W2-I "High" and W3-I "Very high".

For installation of waterproof membranes in tanks and pools (e.g. swimming pools, underground water reservoirs) to DIN 18535 Part 3 for water action class W1-B.

Resistant to freeze-thaw cycling with de-icing salt immersion as part of tests on surface protection systems to DIN EN 1504-2 (Protection and repair of concrete structures - OS5b).

Properties

Flexible, high-coverage, quick-drying, reactive, bitumen-free, two-component waterproof coating for production of flexible, crack-bridging membranes. Coating certified under "Guidelines for the design and installation of waterproof membranes using flexible, polymer-modified thick coatings" issued by Deutsche Bauchemie e.V. (German Construction Chemicals Manufacturers' Association).

Suitable substrates

Concrete, lightweight concrete; foundations; existing bitumen waterproofings; ground slabs; cement and lime/cement renders, renders made from masonry cement, plane, flush-jointed masonry built from clay units, calcium silicate units, slag blocks and cellular blocks; aerated concrete; composite masonry; smooth off-form concrete surfaces; cleaned, grease-free PVC and stainless steel.

substrate preparation

Any laitance shall be mechanically removed. This specifically applies to supporting concrete base and end surfaces, e.g. for facing masonry assemblies. Substrate shall be strong, dimensionally stable and free from wide cracks and adhesion-impairing substances. Where no primer is used, adequately pre-wet cementitious substrates to ensure that they are slightly damp when coating is applied. High-suction substrates should be pretreated with a Sopro primer. All relevant guidelines, recommendations and good-practice codes shall apply. As structural waterproofing/tanking membrane: Open end joints and joints/hollows (e.g. in masonry, cellular brickwork/blockwork) up to 5 mm may be levelled out by means of Sopro ZR 618 skim coat. Fill joints ≥ 5 mm using Sopro RAM 3 454 renovation and levelling mortar. Substrate shall be free from any adhesion-impairing substances, e.g. oil, grease, dust or release agent residue. Masonry surfaces shall be flush-jointed. Arrises and internal angles shall be rounded (4 – 6 cm radius). Hack away projecting mortar residue and even out any fins or sharp irregularities.

When repairing existing waterproof bitumen coatings, start by applying Sopro ZR 618 skim coat. When this has fully dried, apply membrane in at least two coats of Sopro ZR 618.

Priming

Substrate suction can be determined by means of wetting test (dampening of substrate). Priming is not required for non-absorbent substrates (e.g. existing tile coverings). With low-suction substrates (e.g. concrete), membrane can be installed directly on slightly dampened substrate. High-suction substrates (where water is quickly absorbed) require priming prior to waterproofing.

Sopro SG 602 primer-sealer:

Absorbent substrates such as 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, natural stone, cast stone and terrazzo. Only use on moisture-resistant timber substrates. Do not use on substrates exposed to risk of rising damp.

Sopro GD 749 primer:

Cement screeds, (self-levelling) calcium sulphate screeds (anhydrite screeds), board subfloors; paperless gypsum wall panels, gypsum plasterboard/joints and filler, gypsum fibreboard, gypsum plaster; fibre-cement board; high- or variable-suction aerated concrete; cement and lime/cement render; masonry cement; flush-jointed masonry.

Application

Fill clean container with liquid Component B, add powder Component A and mix with stirrer to homogeneous, workable, lump-free consistency. Liquid and powder components are supplied in correct proportions. Briefly restir after 3 – 5 minutes maturing time. Brush or trowel apply membrane in at least two coats to slightly damp or primed substrate. Apply second coat after first coat has properly set. Sopro ZR 618 is also suitable for roller and spray application and may be applied using industry-standard bitumen spray equipment. Use of e.g. Desoi SP-Y screw pump, Inomat M8 feed pump, b & m BMP 6 screw pump and High Tech HighPumpM8 or HighPumpSmall pump is recommended. Sopro recommendation: Where necessary to achieve perfect rolling or sprayable consistency, approx. 2 % water may be added per whole container.

Use for waterproofing elements in contact with soil (DIN 18533): Prior to application of first membrane coat, sharp arrises – e.g. on ground slab – shall be chamfered. Likewise, a water-repellent, low-capillarity mortar shall be used to form sealing coves at junctions with ground slab or pipe penetrations. After completion of levelling works, Sopro ZR 618 shall be applied in at least two coats in compliance with good practice. Apply second coat after first coat has properly set. After second membrane coat has fully dried, this shall be permanently shielded against damaging action by protective layers or coats.

Use for waterproofing normal, recessed and access balconies (DIN 18531 Part 5): Start by sealing angles and junctions between wall and floor surfaces with Sopro sealing tape and Sopro sealing tape for angles certified for system compatibility. To incorporate sealing tape and fittings, place these in coat of Sopro ZR 618 and press down such that mineral sealing slurry is squeezed out at sides. Any unevenness or creases can be pressed down and smoothed out with finishing trowel. In compliance with good practice, Sopro ZR 618 shall be applied in at least two coats up to plinth height. Sealing tape and fittings shall be fully overcoated. Apply second coat after first coat has properly set. Tilelaying can commence (e.g. with Sopro MEG 666 megaFlex turbo Silver highly flexible tile adhesive) after second membrane coat has fully dried.

Use for waterproofing in wet spaces in conjunction with tile finish (DIN 18534): Start by sealing angles and junctions between wall and floor surfaces with Sopro sealing tape and Sopro sealing tape for angles certified for system compatibility. Seal any penetrations with Sopro wall collars or Sopro floor collars certified for system compatibility. To incorporate sealing tape and fittings, place these in coat of Sopro ZR 618 and press down such that mineral sealing slurry is squeezed out at sides. Any unevenness or creases can be pressed down and smoothed out with finishing trowel. In compliance with good practice, Sopro ZR 618 shall be applied in at least two coats. Sealing tape and fittings shall be fully overcoated. Apply second coat after first coat has properly set. Tilelaying can commence (e.g. with Sopro's No.1 Silver flexible tile adhesive) after second membrane coat has fully dried.

Use for waterproofing in tanks and pool in conjunction with tile finish (DIN 18535): Three-coat application is recommended by Sopro for underwater applications (min. 2.5 mm dry coat thickness). Upon completion of waterproofing works, trial filling of pool is required. With Sopro ZR 618 membranes, this may be performed after 2 days. Upon completion of trial

filling, a two-day waiting time is required after pool is emptied. Dried waterproof membrane shall then be visually inspected and thoroughly cleaned to remove dust and adhesion-impairing deposits or incrustations. After this, tiling may be performed.

Coat thickness required for specific application is indicated in coverage chart. All suitable Sopro products for standards-compliant application are listed under "Test certificates". Please observe technical product information for relevant system products!

Please note: In case of critical substrates (e.g. masonry), scrim (e.g. Sopro AR 562 scrim) may be incorporated in first membrane coat to increase crack-bridging performance. Sopro ZR 618 is also overcoatable and suitable as plastering/rendering background. To overcoat larger areas (> 1 m²), first apply combed skim coat to fully dried waterproof membrane with a Sopro flexible tile adhesive (e.g. Sopro's No.1 Silver). When crests of coat have set, surface can be overcoated with renovation and levelling render (e.g. Sopro RAP 2 434) or renders of mortar groups P II or P III to DIN 18550 (depending on application and manufacturer's specifications). Smaller areas (< 1 m²) can also be overcoated without prior application of a skim coat.

Application temperature Optimum workability from +5 °C to +25 °C

Coat thickness In compliance with good practice, mineral sealing slurry shall be applied in at least two coats. Three-coat application is recommended by Sopro for underwater applications (min. 2.5 mm dry coat thickness). Stated consumption rates are minimum values. Separate, good-practice evening out of substrate, e.g. through application of a skim coat, is a prerequisite. Under DIN standards, minimum dry coat thickness d_{min} must be ensured by adding an (imputed) thickness supplement equal to at least 25 % of d_{min} . Additional consumption for a 25 % thickness supplement is given as consumption for required minimum dry coat thickness $d_{min} \times 0.25$.

Checks on coat thicknesses and drying: Under DIN 18195 Supplement 2, compliance with coat thickness requirements shall be ensured during application by checking applied quantity per m² and wet coat thickness.

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Coverage chart Coat thicknesses after 2-coat application in accordance with good practice:

(Water) action classes	Test criteria	min. dry coat thickness	min. Wet coat thickness	Consumption rate per m ²
W1-E, W2.1-E*, W3-E*	to PG-MDS	2.0 mm	2.2 mm	2.4 kg/m ²
W1.1-E, W1.2-E	to PG-FPD Ground moisture and water without hydrostatic pressure (concrete elements)	2.0 mm	2.2 mm	2.4 kg/m ²
W1.1-E, W1.2-E*	to PG-FPD Ground moisture and water without hydrostatic pressure (masonry)	3.0 mm	3.3 mm	3.6 kg/m ²

W2.1-E*	to PG-FPD Moderate water pressure action < 3 m	4.0 mm	4.4 mm	4.8 kg/m ²
W2.2-E**		4.0 mm	4.4 mm	4.8 kg/m ²
W1-B	to PG-FPD Tank/pool membrane	4.0 mm	4.4 mm	4.8 kg/m ²
W3-E*	to PG-FPD Buried ground slabs	3.0 mm	3.3 mm	3.6 kg/m ²
W4-E	to PG-MDS/FPD Splash water acting on plinths and capillary water in and below walls	2.0 mm	2.2 mm	2.4 kg/m ²
Skim coat	-	-	-	1 – 2 kg/m ²
Bonding of protective, insulation and drainage boards	-	-	-	1 – 2 kg/m ²
Radon barrier	in accordance with building radon protection	4.0 mm	4.4 mm	4.8 kg/m ²
W0-I, W1-I, W2-I, W3-I	to PG-AIV-F low to very high water action indoors	2.0 mm	2.2 mm	2.4 kg/m ²
W1-B	to PG-AIV-F <= 5 m filling level in tanks and pools	2.0 mm	2.2 mm	2.4 kg/m ²
DIN 18531 Part 5	to PG-AIV-F CMOP1 - Crack-bridging ability at low temperatures (-5°C)	2.0 mm	2.2 mm	2.4 kg/m ²

* as special (i.e. non-standardized) construction (

** on concrete substrates up to 4 m immersion depth as special construction

Laying of ceramic coverings	After 2 - 3 hours
Loadable	Backfilling possible after only approx. 6 hours
Maturing time	3-5 minutes
Mischungsverhältnis (2K Produkte)	24 kg combi pack: 16 kg powder Component A : 8 kg liquid Component B Sopro recommendation: Where necessary to achieve perfect rolling or sprayable consistency, approx. 2 % water may be added per whole container.tainer.
Shelf life	12 months, subject to storage on pallet in dry, frost-free conditions in original unopened containers. Protect liquid component from frost. Do not store liquid component at temperatures above +30 °C.
Specified times	Apply for normal temperature range of +23 °C and 50 % relative humidity; higher temperatures shorten and lower temperatures lengthen these times.

Tool cleaning	Clean tools with water immediately after use; mechanical cleaning required when set.
Tools	Finishing trowel, notched spatula, lambswool roller, thick/block brush, spray equipment
Working life	Approx. 50 minutes
backfilling	After approx. 6 hours
crack bridging	≥ 0.75 mm
rain resistance	Approx. 2,5 hours per coat
Test certificates	<p>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: sealing tape: AEB 148, AEB 1176, DB 438, DBF 638; angle seals: AEB 642, AEB 643, DE 014, DE 015; sealing collars: AEB 112, AEB 129, AEB 130, AEB 131, AEB 132, AEB 133, AEB 645, DWF 089, DMB 091; tile adhesives: Sopro's No.1 (order no. 400), Sopro's No.1 Silver (order no. 403), Sopro's No.1 rapid-set (order no. 404), FKM 600 Silver, MEG 665, MEG 666 Silver, MEG 667 Silver, VF HF 420, FKM XL 444; and other Sopro components.</p> <p>PG-MDS/FPD (Criteria for Award of National Test Certificates for Mineral Sealing Slurries for Structural Waterproofing/Flexible Polymer-Modified Thick Coatings): National test certificate (abP) for use as mineral sealing slurry, for structural waterproofing in conjunction with: sealing tape: AEB 148, AEB 1176, DB 438, DBF 638; angle seals: AEB 642, AEB 643, DE 014, DE 015; sealing collars: AEB 129, AEB 130, AEB 112, AEB 133, AEB 131, AEB 132, AEB 645, DMB 091, DWF 089; primer: GD 749 and other Sopro components</p> <p>PG-ÜBB (Criteria for Award of National Test Certificates for Junctions between Structural Waterproofing Membranes and Concrete Elements Offering High Water Penetration Resistance): (Test certificate in preparation)</p> <p>DIN EN 14891: In conjunction with suitable Sopro tile adhesives and Sopro GD 749 primer – Class CMO1P (crack-bridging ability at low temperatures (-5 °C) and resistant to contact with chlorinated water)</p> <p>Test report on freeze-thaw cycling with de-icing salt immersion: Products and systems for the protection and repair of concrete structures – Test methods – Determination of thermal compatibility – Part 1</p> <p>Determination of radon barrier performance: Radon protection to minimize radon migration from ground into building (dry coat thickness = 4 mm)</p> <p>Rear-face water exposure to WTA (International Association for Science and Technology of Building Maintenance and Monuments Preservation) guidance paper 4 - 6: (Test certificate in preparation)</p>
Licence	EMICODE system of GEV (German Association for the Control of Emissions in Products for Flooring Installation, Adhesives and Building Materials): EC1 ^{PLUS} ("very-low-emission-plus") rating
Safety precautions	<p>Component A Labelling in accordance with Regulation (EC) No 1272/2008 (CLP). GHS05 Signal word: Danger H315 Causes skin irritation. H318 Causes serious eye damage.</p>

P102 Keep out of reach of children. P261 Avoid breathing dust. P280 Wear protective gloves/protective clothing/eye protection/face protection/ 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.

Contains: Portland cement, Cr (VI) < 2 ppm.

Low-chromate to Regulation (EC) No 1907/2006, Annex XVII
 GISCODE ZP1

Component B

Exempt from labelling requirements under Regulation (EC) No 1272/2008 (CLP).
 EUH210 Safety data sheet available on request. EUH208 Contains a mixture of:
 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one in proportions 3:1.
 May produce an allergic reaction. Avoid contact with skin.
 P102 Keep out of reach of children. P332+P313 If skin irritation occurs: Get medical advice/attention. P501 Dispose of contents/container in accordance with regulations.
 GISCODE M-GP01

Disposal Considerations

The generation of waste should be avoided or minimized wherever possible. Recover if possible.
 A waste code (EWC) according to European List of Waste (LoW) cannot be specified, due to dependence on the usage. Contact and send to an authorized waste disposal service.
 Methods of disposal:
 Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
 Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Do not dispose of waste into sewers.
 Hazardous waste: Yes
 Disposal considerations:
 Do not allow to enter drains or watercourses.
 Dispose of product according to all federal, state and local applicable regulations.
 If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.
 Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.
 Special precautions:
 This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.
 Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
 Empty containers or liners may retain some product residues. Do not re-use empty containers.

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