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RAKO
SYSTEM

**Construction
chemicals
catalogue**

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P201 DEEP PENETRATION

A deep-penetrating primer for absorbent substrates, or substrates requiring deeper reinforcement, prior to the installation of ceramic wall and floor tiles using cementitious adhesives, insulating coatings and levelling compounds. It reduces and evens out the absorbency of the substrate and increases its cohesion. This ensures sufficient open time for the adhesives and their adhesion to the substrate. Also suitable for plasterboard.

Further information:

- **Drying time:** 12 hours
- **Dilution:** max. 1 : 1
- **Shelf life:** 24 months in a dry environment, protect from frost

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.P201.R005	0.15–0.25 l/m ²	5 kg/480 kg (96 pcs)
B.P201.R010		10 kg/400 kg (48 pcs)



P202 UNIVERSAL PRIMER

A water-dilutable dispersion designed, when used at the specified concentration, to prime and seal absorbent surfaces of substrate structures prior to the application of anhydrite, cement and concrete screeds, levelling compounds, cementitious fillers, levelling and self-levelling compounds, both indoors and outdoors. It reduces absorbency and strengthens the substrate surface; for selflevelling compounds, it improves their flow properties and increases their adhesion.

Further information:

- **Drying time:** 60–120 minutes
- **Dilution:** up to 1 : 5 depending on the substrate
- **Shelf life:** 24 months in a dry environment; protect from frost

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.P202.R001	0.10–0.35 l/m ²	1 kg/480 kg (480 pcs)
B.P202.R005		5 kg/480 kg (96 pcs)
B.P202.R010		10 kg/400 kg (48 pcs)



P203 BONDING AGENT

A bonding primer based on a solvent-free synthetic dispersion and mineral filler, designed for smooth and compact substrates (glass, ceramics, polished stone, machine-finished concrete, CETRIS, Formica, synthetic coatings, etc.) and substrates containing bitumen. Single-component coating for direct application – undiluted. Recommended for both external and internal use. Suitable for use under polymer-modified materials: waterproofing membranes, ceramic tile adhesives, self-levelling compounds, flexible mortars.

Do not use on plastic surfaces (e.g. polyethylene, Teflon).

Further information:

- **Drying time:** 6 to max. 48 hours
- **Dilution:** do not thin
- **Shelf life:** 12 months in a dry environment, protect from frost

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.P203.R005	0.25–0.40 kg/m ²	5 kg/180 kg (72 pcs)



5050 (P204) BONDING AGENT

Bonding bridge (adhesive primer) for treating smooth and non-absorbent substrates (smooth concrete, ceramic tiles, tiles, Formica, sheet metal, extruded polystyrene, etc.). High adhesion, easy to apply. Reliably reduces and evens out the absorbency of substrates, suitable for concrete and screeds. When mixed with sand, it increases the adhesion of applied materials. As a bonding bridge for composite screeds.

Further information:

- **Grain size (mm):** 0,7
- **Usage:** up to 31 m² per bag
- **Recommended thickness (mm):** 0,7
- **Shelf life:** 9 months in a dry environment



LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.P204.C025	0.90 kg/m ²	25 kg/1200 kg (48 pcs)*☒

*☒ Made-to-order item, delivery time approx. 2 weeks.



OV30 LEVELLING SCREED

For the manual application of bonded and floating walkable screeds in indoor and, in particular, outdoor environments for sloped surfaces (terraces, balconies) where significant variations in layer thickness are required. The recommended thickness of the applied layer is 5–100 mm.

Further information:

- **Compressive strength:** min. 30 MPa
- **Workability:** 1 hour
- **Walkable after:** 3 days
- **Tiling:** min. after 14 days
- **Shelf life:** 24 months in a dry environment

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.OV30.R025	20 kg/m ² /10 mm	25 kg/1200 kg (48 pcs)



5281 (OV35) FAST-SETTING LEVELLING SCREED

For the rapid installation of bonded (connected, in-situ) and floating walkable screeds in indoor and, above all, outdoor environments. For sloped surfaces (terraces, balconies) where there are requirements for significant layer thickness variation and, above all, for rapid curing and reduction of residual moisture during application under adverse climatic conditions. The recommended thickness of the applied layer is 5–100 mm.

Further information:

- **Compressive strength:** min. 40 MPa
- **Workability:** 30 minutes
- **Walkable after:** 3–4 hours
- **Tiling:** after 24 hours
- **Shelf life:** 12 months in a dry environment

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.OV35.C025	20 kg/m ² /10 mm	25 kg/1200 kg (48 pcs)



LE20 News SELF-LEVELLING COMPOUND WITH FIBRES

Self-levelling compound for both manual and machine application. Used for levelling floors prior to laying ceramic tiles and other floor coverings. **Reduces the formation of cracks.** Applied to solid, dry and clean substrates treated with a suitable primer. It is applied in layers of 2–20 mm in a single application. Suitable for embedding heating cables and electric underfloor heating mats, including the levelling of cement screed surfaces with built-in hot-water underfloor heating. The compound is not intended as a final wear layer.

Further information:

- **Compressive strength:** 20 MPa
- **Workability:** 30 minutes
- **Walkable after:** 6–8 hours
- **Shelf life:** 12 months in a dry environment
- **Application thickness:** 2–20 mm

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.LE20.R025	1.70 kg/m ² /1 mm	25 kg/1200 kg (48 pcs)





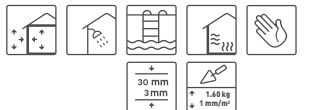
5570 NIVELA RAPID

Self-levelling compound for perfectly flat floors. Levels unevenness to a thickness of 1–30 mm. Fast setting: Walkable after 4 hours with a layer thickness of 10 mm. Suitable for rolling loads: Resistant to office chair castors. Gypsum-based: Highly flexible and crackresistant, allowing for thermal expansion. Suitable for anhydrite screeds (calcium sulphate). Creates a smooth and compact surface, ideal for thin vinyl coverings. Suitable for low-profile underfloor heating. Suitable for floor renovations to create a substrate on old screeds with residues of water-insoluble adhesives.

Further information:

- **Compressive strength:** 25 MPa
- **Workability:** 20 minutes
- **Walkable after:** 4 hours
- **Shelf life:** 12 months in a dry environment
- **Application thickness:** 1–30 mm

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.5570.C025	1.70 kg/m ² /1 mm	25 kg/1200 kg (48 pcs)



5286 (LE21) REPAIR MORTAR

Fast-setting fibre-reinforced cementitious compound, ready for tiling after just 3 hours. Levelling compound for use prior to the application of waterproofing and self-levelling screeds or ceramic wall and floor tiles. Does not crack, contains fibres, used to create slopes for water drainage on balconies, terraces and loggias. For filling potholes in floors prior to the application of self-levelling compounds. Frost-resistant, suitable for outdoor use. Fine grain, easy to apply.

Further information:

- **Grain size (mm):** 0.7 mm
- **Compressive strength:** 25 MPa
- **Workability:** 30 minutes
- **Walkable after:** 3 hours
- **Shelf life:** 9 months in a dry environment

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.LE21.C025	1.60 kg/m ² /1 mm	25 kg/1200 kg (48 pcs)



9320 CONCRETE DRAINAGE

Water-permeable: Allows water to drain into the soil and be retained in the subsoil, for water retention in the landscape and water management. Promotes the drying of masonry and prevents frost damage. Highly durable: Load-bearing up to 1.6 tonnes. Prevents waterlogging, even in garden walls with water pressure on slopes. For creating drainage. To divert water away from the building so it cannot penetrate the cellar walls. A drainage layer that protects insulation from damage caused by standard gravel backfill. Suitable as a base for paving on pedestals or for direct contact under the right conditions.

Further information:

- **Compressive strength:** 15 MPa
- **Workability:** 1 hour
- **Walkable after:** 3 days
- **Shelf life:** 12 months in a dry environment

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.9320.C025	20 kg/m ² /10 mm	25 kg/1200 kg (48 pcs)



SE1 News SINGLE-COMPONENT WATERPROOFING COATING

Waterproofing for internal use on load-bearing mineral substrates (cement and lime-cement plasters, concrete, anhydrite), plasterboard, chipboard and cement-bonded particle boards, etc. When dry, it forms a continuous waterproofing membrane for areas subject to transient (splash) moisture (e.g. toilets, bathrooms, shower cubicles, etc.). It provides a substrate for bonding ceramic tiles and natural or artificial stone. In areas with increased moisture exposure, tiled floor surfaces (e.g. shower cubicles) must be constructed with a 2% gradient and using SE6 waterproofing. Suitable for underfloor heating. Not suitable for swimming pools or areas permanently exposed to pressurised water, or for surfaces subject to shear stress or rising damp (use SE6 in such cases).

Further information:

- **Bonding:** after 24 hours
- **Shelf life:** 12 months in a dry environment, protect from frost

LABELLING	PACKAGING pcs/pallet
B.SE1.R005	5 kg/300 kg (60 pcs)
B.SE1.R020	20 kg/480 kg (24 pcs)



SE2 TWO-COMPONENT WATERPROOFING 2K

Elastomeric, waterproof, two-component cementitious waterproofing for both internal and external use. It is suitable for all types of mineral substrates (e.g. plaster, concrete, anhydrite, plasterboard), has a long service life, and bonds even to damp concrete. It creates an effective barrier against sulphates and chlorides and is vapour-permeable. It can be used for applications without a covering, paving on pedestals, and with a covering – ceramic tiles, natural and artificial stone, perimeter polystyrene, dimpled membrane, etc. It is suitable for environments subject to moisture – foundations, external walls of the substructure, tanks, walls and floors in both indoor and outdoor environments (e.g. swimming pools, bathrooms, showers, toilets, balconies, terraces, etc.). It is applied with a trowel in two layers to a total thickness of 2 mm. It is quick and easy to apply; at the specified application thickness, it cures without internal stress and without cracking. It is frost-resistant and age-resistant, waterproof, and has good adhesion to the substrate.

Further information:

- **Workability:** 30–40 minutes
- **Bonding:** after 24 hours, for swimming pools after 5 days
- **Walkable after:** 4 hours
- **Shelf life:** 18 months in a dry environment, protect from frost

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.SE2.R020	1.70 kg/m ² /1 mm	20 kg/320 kg (16 pcs)



SE6 FLEXIBLE SINGLE-COMPONENT WATERPROOFING SCREED

A hydraulically setting, crack-bridging waterproofing screed designed for waterproofing floors and walls prior to the installation of ceramic tiles. It is suitable for use in both internal and external areas, such as: basement walls, foundations, tanks, wall and floor surfaces in damp areas, and particularly for swimming pools. It is applied with a trowel in two to three layers to a total thickness of 2–3 mm depending on the application (non-pressurised/pressurised water). The substrate must be sound and clean. In high temperatures, the surface may be dampened.

Further information:

- **Workability:** 1 hour
- **Bonding:** after 20 hours, for swimming pools after 7 days
- **Shelf life:** 24 months in a dry environment

LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.SE6.R020	1.50 kg/m ² /1 mm	20 kg/960 kg (48 pcs)



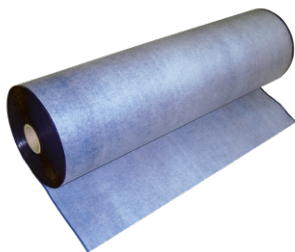
SE5 SEALING TAPE

Double-sided laminated tapes designed for bridging and sealing expansion joints and pipe penetrations, as well as connections between the floor and wall in SE1, SE2, SE6, SEP and DMEM insulation systems.

Further information:

- **Shelf life:** in a dry environment

LABELLING		PACKAGING
B.SE5.R010.D008	width 80 mm, length 10 m	10 running metres
B.SE5.R010.D010	width 100 mm, length 10 m	10 running metres
B.SE5.R010.D012	width 120 mm, length 10 m	10 running metres
B.SE5.R010.D100	width 1 000 mm, length 10 m	10 running metres
B.SE5.R050.D008	width 80 mm, length 50 m	50 running metres
B.SE5.R050.D010	width 100 mm, length 50 m	50 running metres
B.SE5.R050.D012	width 120 mm, length 50 m	50 running metres
B.SE5.RINT	internal corner	1 pc
B.SE5.ROUT	external corner	1 pc
B.SE5.R001.D430	sealing collar 430/430 mm	1 pc



SEP INSULATION FOIL

Polyethylene insulation film, bridging cracks, designed for use directly under ceramic tiles. It is suitable for sealing structures in both internal and external areas, particularly on floor surfaces in damp and permanently wet locations where there is a high risk of cracks developing. SEP is therefore particularly suitable for large-area terraces. Installation is carried out using contact sealant 1500 (P204). Joints are overlapped by 50–100 mm and bonded using the SE6 (SE2) insulation trowel. The substrate must be solid, clean, level and treated with a suitable primer.

Further information:

- **Bonding:** after 24 hours
- **Shelf life:** in a dry environment

LABELLING	USAGE (approx.)	PACKAGING
B.SEP.R030	1.10 m ² /m ²	30 m ² roll (1 m wide)



AD505

ADHESIVE FOR INTERIOR TILES

For bonding ceramic wall and floor tiles with higher water absorption in indoor environments. Not suitable for bonding to substrates subject to dimensional changes (heated floors, exteriors) or for bonding swimming pool tiles. Frostresistant in dry, indoor environments.

Further information:

- **EN 12004:** type C1T
- **Slip:** max. 0,5mm (Wacker 800g)
- **Open time:** min. 20 minutes
- **Shelf life:** 24 months in a dry environment
- **Grain size:** 0–0.7 mm



LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.AD505.R025	2.1-6.0 kg/m ²	25 kg/1 200 kg (48 pcs)



AD510 News

FINE CEMENTITIOUS ADHESIVE FOR INTERIOR AND EXTERIOR USE

High-performance adhesive designed for bonding all types of ceramic wall and floor tiles in indoor and outdoor environments, including materials with extremely low water absorption (e.g. Taurus). Suitable for surfaces with thermally stressed substrates (underfloor heating). Creamy consistency for easy application. Adhesive for large-format tiles; sets and cures without air exposure; chemically binds the mixing water – no need for evaporation.

Further information:

- **EN 12004:** type C2T
- **Slip:** max. 0.3mm (Wacker 1 200g)
- **Open time:** min. 20 minutes
- **Shelf life:** 24 months in a dry environment
- **Grain size:** 0–0.4 mm



LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.AD510.R025	cca 2.1-6.0 kg/m ²	25 kg/1 200 kg (48 pcs)



AD520

ADHESIVE FOR INTERIOR AND EXTERIOR USE

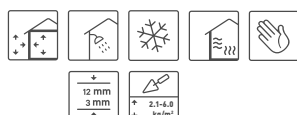
A high-performance adhesive designed for bonding all types of ceramic tiles in both indoor and outdoor environments, including materials with extremely low water absorption (e.g. Taurus). The adhesive is also suitable for surfaces subject to thermal stress (underfloor heating). It is also suitable for areas subject to heavy traffic from forklift trucks, cars, etc. The adhesive's advantages include ease of application, high durability, strength and frost resistance.

Further information:

- **EN 12004:** type C2TE
- **Open time:** min. 30 minutes
- **Shelf life:** 24 months in a dry environment
- **Grain size:** 0–0.7 mm



LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.AD520.R025	cca 2.1-6.0 kg/m ²	25 kg/1 200 kg (48 pcs)



AD530

PROFI FLEXIBLE ADHESIVE

A flexible adhesive with an extended open time, designed for bonding all types of ceramic wall and floor tiles in both indoor and outdoor environments, including materials with extremely low water absorption (e.g. Taurus), and for bonding to substrates subject to dimensional changes (underfloor heating, balconies, terraces). The adhesive is also suitable for areas subject to heavy traffic from forklift trucks, cars, etc. The adhesive's advantages include ease of application, high durability and strength, frost resistance and high flexibility.

Further information:

- **EN 12004:** type C2TE S1
- **Transverse deformation according to EN 12002:** S1 deformable
- **Slip:** max. 0.5 mm (Wacker 1 000 g)
- **Open time:** min. 30 minut
- **Shelf life:** 24 months in a dry environment
- **Grain size:** 0–0.7 mm



LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.AD530.R025	cca 2.1–6.0 kg/m ²	25 kg/1 200 kg (48 pcs)



AD531 MAX

FLEXIBLE ADHESIVE FOR LARGE-FORMAT TILES

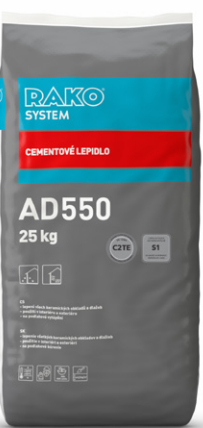
Flexible adhesive designed for bonding large-format floor and wall tiles ($\geq 60 \times 60$ cm). The new formulation offers high adhesion and transverse deformation resistance, with an extended open time and reduced slip. The improved properties ensure easy workability, stress-free curing (stability) and guaranteed resistance to efflorescence. The adhesive is suitable for bonding all types of ceramic wall and floor tiles, natural and artificial stone in both indoor and outdoor environments. It is excellent for materials of all sizes with extremely low water absorption (e.g. Taurus) and for substrates subject to dimensional changes (underfloor heating, large-area terraces, balconies). Thanks to its high resistance to efflorescence, it is suitable for areas subject to constant moisture (facades, underpasses, underground collectors and structures). It can be used as a self-levelling adhesive (see technical data sheet).

Further information:

- **EN 12004:** type C2TE S1
- **Transverse deformation according to EN 12002:** S1 deformable
- **Slip:** max. 0.5 mm (Wacker 1 000 g)
- **Open time:** min. 30 minutes
- **Shelf life:** 24 months in a dry environment
- **Grain size:** 0–0.7 mm



LABELLING	USAGE (approx.)	PACKAGING pcs/pallet
B.AD531.R025	cca 2.1–7.0 kg/m ²	25 kg/1 200 kg (48 pcs)



AD550

WHITE FLEXIBLE ADHESIVE

Flexible adhesive with extended open time for bonding all types of small-format ceramic tiles, natural and artificial stone, in both indoor and outdoor environments, including materials with extremely low water absorption (glass mosaic). Also suitable for installation on substrates subject to dimensional changes (underfloor heating, balconies, terraces and swimming pools). The adhesive is also suitable for areas subject to heavy traffic from forklift trucks, cars, etc.

Further information:

- **EN 12004:** type C2TE S1
- **Transverse deformation according to EN 12002:** S1 deformable
- **Slip:** max. 0.5 mm (Wacker 1 000 g)
- **Open time:** min. 30 minutes
- **Shelf life:** 24 months in a dry environment
- **Grain size:** 0–0.4 mm



LABELLING	USAGE (approx.) ridge height: 4 mm	PACKAGING pcs/pallet
B.AD550.R025.100	2.1–4.2 kg/m ²	25 kg/1 200 kg (48 pcs)

8270 (AD580)

FAST SETTING ADHESIVE FOR INTERIOR AND EXTERIOR USE

For bonding ceramic tiles in interior environments where rapid foot traffic is required. Suitable for bonding low-absorbency materials (e.g. Taurus) and for heated floors and substrates treated with insulating coatings and levelling compounds.

Further information:

- **EN12004:** type C2FT S1
- **Walkable after:** 3–4 hours
- **Slip:** max. 0.5 mm (Wacker 800 g)
- **Open time:** min. 15 minutes
- **Shelf life:** 9 months in a dry environment
- **Grain size:** 0–0.4 mm



LABELLING	USAGE (approx.) ridge height: 8 mm	PACKAGING pcs/pallet
B.AD580.C025	2.1–6.0 kg/m ²	25 kg/1 200 kg (48 pcs)

AD560 News

GEL-BASED FLEXIBLE ADHESIVE FOR XXL CERAMIC TILES WITH ZERO SLIP

Flexible adhesive designed for bonding large-format floor and wall tiles (> 80 × 80 cm). The new formulation exhibits high adhesion and transverse deformation resistance. It contains trass, which prevents efflorescence, and is suitable for outdoor areas exposed to water (terraces, balconies, facades). It cures and matures within the centre of XXL formats without air access, chemically binding the mixing water – it does not need to evaporate.

Further information:

- **EN12004:** type C2T S1
- **Transverse deformation according to EN 12002:** S1 deformable
- **Slip:** max. 0.3 mm (Wacker 1 200 g)
- **Open time:** min. 20 minutes
- **Shelf life:** 24 months in a dry environment
- **Grain size:** 0–0.4 mm



LABELLING	USAGE (approx.) ridge height: 8 mm	PACKAGING pcs/pallet
B.AD560.R025	2.1–6.0 kg/m ²	25 kg/1 200 kg (48 pcs)



GF DRY

FLEXIBLE, HIGHLY WATER-REPELLENT GROUT

A flexible, water-repellent grout designed for grouting ceramic tiles, floor tiles and mosaics with a joint width of 2–10 mm. **Hydrophobic additives ensure a water-repellent effect, thereby preventing clogging and significantly improving the hygiene of the ceramic surface!** It is suitable for wall and floor tiles, particularly in bathrooms, kitchens and other areas with high hygiene requirements. It is also suitable for balconies, terraces, facades, underfloor heating systems, as well as restaurants, shops, etc. It is specifically designed for grouting on DSDI panels when laying soundproof flooring. It is not suitable for expansion joints or for surfaces requiring chemical resistance.

Further information:

- **EN 13888:** type CG2 WA
- **Walkable after:** 18 hours
- **Workability:** 2 hours
- **Operational load:** after 7 days
- **Number of colours:** 18
- **Shelf life:** 24 months for 2 + 5 kg, 18 months for 20 kg in a dry environment



		LABELLING	CONSUMPTION** (approx.)	PACKAGING pcs
GF DRY 129	black	B.GF DRY.R005.129	0.3–0.8 kg/m ²	5 kg
GF DRY 123	antracite	B.GF DRY.R005.123	0.3–0.8 kg/m ²	5 kg
GF DRY 122	grey	B.GF DRY.R002.122	0.3–0.8 kg/m ²	2 kg
		B.GF DRY.R005.122	0.3–0.8 kg/m ²	5 kg
		B.GF DRY.R020.122	0.3–0.8 kg/m ²	20 kg
		B.GF DRY.R002.121	0.3–0.8 kg/m ²	2 kg
GF DRY 121	manhattan	B.GF DRY.R005.121	0.3–0.8 kg/m ²	5 kg
		B.GF DRY.R020.121	0.3–0.8 kg/m ²	20 kg
GF DRY 120	light grey	B.GF DRY.R002.120	0.3–0.8 kg/m ²	2 kg
		B.GF DRY.R005.120	0.3–0.8 kg/m ²	5 kg
GF DRY 100	white	B.GF DRY.R002.100	0.3–0.8 kg/m ²	2 kg
		B.GF DRY.R005.100	0.3–0.8 kg/m ²	5 kg
		B.GF DRY.R020.100	0.3–0.8 kg/m ²	20 kg
GF DRY 131	jasmine	B.GF DRY.R002.131	0.3–0.8 kg/m ²	2 kg
		B.GF DRY.R005.131	0.3–0.8 kg/m ²	5 kg
GF DRY 132	bahama	B.GF DRY.R002.132	0.3–0.8 kg/m ²	2 kg
		B.GF DRY.R005.132	0.3–0.8 kg/m ²	5 kg
		B.GF DRY.R020.132	0.3–0.8 kg/m ²	20 kg
GF DRY 133	anemon	B.GF DRY.R005.133	0.3–0.8 kg/m ²	5 kg
GF DRY 134	caramel	B.GF DRY.R002.134	0.3–0.8 kg/m ²	2 kg
		B.GF DRY.R005.134	0.3–0.8 kg/m ²	5 kg
GF DRY 139	dark brown	B.GF DRY.R005.139	0.3–0.8 kg/m ²	5 kg
GF DRY 135	brown	B.GF DRY.R005.135	0.3–0.8 kg/m ²	5 kg
GF DRY 149	red	B.GF DRY.R005.149	0.3–0.8 kg/m ²	5 kg
GF DRY 145	brick red	B.GF DRY.R005.145	0.3–0.8 kg/m ²	5 kg
GF DRY 162	dark yellow	B.GF DRY.R005.162	0.3–0.8 kg/m ²	5 kg
GF DRY 115	turquoise	B.GF DRY.R005.115	0.3–0.8 kg/m ²	5 kg
GF DRY 113	sky blue	B.GF DRY.R005.113	0.3–0.8 kg/m ²	5 kg
GF DRY 119	dark blue	B.GF DRY.R005.119	0.3–0.8 kg/m ²	5 kg

** Consumption depends on the joint width and the dimensions of the tiling materials.



„DRY EFFECT“ – declaration of non-absorbency



GFBIO

FLEXIBLE WATER-REPELLENT GROUT WITH BIOCIDES

An easy-to-apply grout with an ideally smooth finish for joints 2–15 mm wide in both indoor and outdoor environments. Hydrophobic additives ensure the surface is non-wetting, creating a 'Dry-Effect' that prevents pores from becoming clogged with dirt and significantly improves the hygiene of the ceramic surface! **The biocide content ensures high resistance to mould, bacteria and algae.** The grout's rapid setting allows it to be walked on after approx. 4 hours and fully loaded after 3 days. **The grout's composition inhibits efflorescence.** Suitable for wall and floor tiles (including natural stone) in kitchens and other areas with high hygiene requirements (restaurants, shops, etc.). Ideal for surfaces where dimensional changes occur due to high thermal stress (e.g. underfloor heating, balconies, terraces, etc.). This grout is part of the RAKO SYSTEM – BATHROOMS system solution. It is also intended for grouting on SDI boards when using the RAKO SYSTEM – QUIET FLOORING system solution. It is not suitable for expansion joints or in areas where increased chemical resistance is required.

Further information:

- **EN 13888:** type CG2 WA
- **Walkable after:** 4 hours
- **Workability:** 1 hour
- **Operational load:** after 3 days
- **Number of colours:** 3
- **Shelf life:** 24 months in a dry environment



		LABELLING	CONSUMPTION** (approx.)	PACKAGING pcs
*	GFBIO 122 grey	B.GFBIO.R005.122	0.3–0.8 kg/m ²	5 kg
	GFBIO 121 manhattan	B.GFBIO.R005.121	0.3–0.8 kg/m ²	5 kg
*	GFBIO 100 white	B.GFBIO.R005.100	0.3–0.8 kg/m ²	5 kg

* While stocks last.

** Consumption depends on the joint width and the dimensions of the tiling materials.



„DRY EFFECT“ – non-absorbent declaration



„BIO EFFECT“ increased resistance to fungi and mould



GSILI

AMORPHOUS SILICA

Amorphous silica (pyrogenic silica) is a high-purity white powder used as an additive in epoxy grouts to increase their density and thixotropy. Used for grouting wide joints (greater than 10 mm) where there is a risk of the grout sinking or running out.

Further information:

- **Shelf life:** 36 months



LABELLING	CONSUMPTION** (approx.)	PACKAGING pcs
B.GSILI.RX40	0.1–0.5 %	400 g

** Consumption depends on the joint width and the dimensions of the tiling materials.



GEASY News

TWO-COMPONENT EPOXY GROUT AND ADHESIVE

For waterproof grouting of tiles in chemically aggressive environments with a joint width of 2–15 mm. It is particularly suitable for swimming pools, warehouses, garages, production halls in the chemical and food industries, laboratories, etc. Also intended for grouting the cladding of drinking water tanks (waterworks, water reservoirs, treatment plants, storage tanks). It is resistant to chemicals (including acids), aggressive water, petroleum products, etc. Not suitable for expansion joints. **Application is significantly simplified! Excellent washability! Contact our technical advisors.**

Further information:

- **EN 13888:** type RG
- **EN 12004:** type R2
- **Walkable after:** 24 hours
- **Workability:** 45 minutes
- **Operational load:** after 7 days
- **Number of colours:** 2 (other colours available to order)
- **Shelf life:** 12 months in a dry environment, protect from frost



	LABELLING	CONSUMPTION** (approx.)	PACKAGING pcs
GEASY 122 grey	B.GEASY.R007.122	0.3–1.8 kg/m ²	7 kg
GEASY 121 manhattan	B.GEASY.R007.121	0.3–1.8 kg/m ²	7 kg

** Consumption depends on the joint width and the dimensions of the tiling materials.



ASI SANITARY SILICONE

Silicone sealant, suitable for flexible joints in sanitary and wet areas such as bathrooms, kitchens, swimming pools, etc. It is resistant to mould and cleaning agents. It exhibits ideal adhesion to ceramics, glass, anodised aluminium, etc. Due to its acidic curing process, it is not suitable for metal (zinc, steel, etc.) and mineral (concrete, plaster, marble, etc.) substrates.

Further information:

- **Joint movement capacity:** 20%
- **Hardness – Shore A:** 24
- **Number of colours:** 18 + transparent
- **Shelf life:** 36 months in a dry environment, protect from frost

		LABELLING	USAGE (approx.) (1 cartridge/running metre)	PACKAGING pcs/box
ASI 129	black	B.ASI.RX31.129	6-12	310 ml/12 pcs
ASI 123	antracite	B.ASI.RX31.123	6-12	310 ml/12 pcs
ASI 122	grey	B.ASI.RX31.122	6-12	310 ml/12 pcs
ASI 121	manhattan	B.ASI.RX31.121	6-12	310 ml/12 pcs
ASI 120	light grey	B.ASI.RX31.120	6-12	310 ml/12 pcs
ASI 199	transparent	B.ASI.RX31.199	6-12	310 ml/12 pcs
ASI 100	white	B.ASI.RX31.100	6-12	310 ml/12 pcs
ASI 131	jasmine	B.ASI.RX31.131	6-12	310 ml/12 pcs
ASI 132	bahama	B.ASI.RX31.132	6-12	310 ml/12 pcs
ASI 133	anemon	B.ASI.RX31.133	6-12	310 ml/12 pcs
ASI 134	caramel	B.ASI.RX31.134	6-12	310 ml/12 pcs
ASI 139	dark brown	B.ASI.RX31.139	6-12	310 ml/12 pcs
ASI 135	brown	B.ASI.RX31.135	6-12	310 ml/12 pcs
ASI 149	red	B.ASI.RX31.149	6-12	310 ml/12 pcs
ASI 145	brick red	B.ASI.RX31.145	6-12	310 ml/12 pcs
ASI 162	dark yellow	B.ASI.RX31.162	6-12	310 ml/12 pcs
ASI 115	turquoise	B.ASI.RX31.115	6-12	310 ml/12 pcs
ASI 113	sky blue	B.ASI.RX31.113	6-12	310 ml/12 pcs
ASI 119	dark blue	B.ASI.RX31.119	6-12	310 ml/12 pcs

NSI NEUTRAL SILICONE

This single-component silicone sealant is designed for use in sanitary environments such as wet areas, bathrooms and toilets. It contains fungicides to protect against mould. It is certified for direct contact with food and drinking water. It is resistant to common household cleaning and disinfecting agents. Uses: Sealing, bonding and grouting marble and other natural stones. For bonding mirrors. Elastic sealing and bonding of glass, metal and aluminium structures.

Further information:

- **Joint movement capacity:** 25%
- **Hardness – Shore A:** 28
- **Number of colours:** 1
- **Shelf life:** 24 months in a dry environment, protect from frost



LABELLING	USAGE (approx.) (1 cartridge/running metre)	PACKAGING pcs/box
B.NSI.RX31.199	6-12	310 ml/12 pcs



SAB

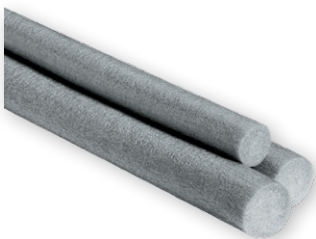
SINGLE-COMPONENT POLYURETHANE SEALANT

A neutral-curing polyurethane sealant suitable for flexible joints on façades, balconies, terraces, etc. It has very good adhesion to most non-porous surfaces without a primer (vitrified and dense ceramics, plastics, metals, painted or glazed wood). It can be easily painted over with emulsion paints.

Further information:

- **Joint movement capacity:** 25 %
- **Hardness – Shore A:** 40
- **Shelf life:** 18 months in a dry environment, protect from frost

LABELLING	USAGE (approx.) (1 cartridge/running metre)	PACKAGING pcs/box
B.SAB.RX31.121	6-12	310 ml/12 pcs



PES

SEPARATION CORD

Inserted into flexible joints prior to the application of flexible sealants. Optimises the shape of the sealant in the joint, prevents unwanted adhesion of the sealant to the bottom of the joint and thus significantly increases its service life and effectiveness.

Further information:

- **Absorbency:** none
- **Operating temperature:** -40 to +80 °C
- **Available diameters:** 4, 6, 8 mm

LABELLING		PACKAGING
B.PES.R100.D04	ø 4 mm	100 running metres
B.PES.R100.D06	ø 6 mm	100 running metres
B.PES.R100.D08	ø 8 mm	100 running metres



CL807

SMOOTHING AGENT

A smoothing agent designed for immediate use on joints sealed with polyurethane and silicone sealants. This product is a new option for smoothing joints, which allows for subsequent repair of the sealant even after application.

Further information:

- **pH:** 6.5-8
- **Shelf life:** 36 months at temperatures between +5 °C and +30 °C, in a dry environment; protect from frost

LABELLING	PACKAGING pcs/box
B.CL807.RX75	0.75 l/18 pcs



CL801

ACTIVE CLEANING FOR VITREOUS CERAMIC TILES

Special cleaning agent for lightly and heavily soiled vitrified unglazed and glazed gresporcellanato tiles, e.g. Taurus type and other unglazed tiles. **More effective cleaning agent formulation, fragrance, new colour.** Regular and daily cleaning in industrial facilities, residential buildings, office buildings and shopping centres. For surfaces affected by limescale, mineral deposits and rust (swimming pools, spas).

Instructions for use: Dilute the product in a bucket of water according to the degree of soiling of the ceramic surface (40–100 ml per 10 l of water), then wipe with a mop or cloth. Failure to follow the recommended concentration may cause the grout to lighten. Do not use in combination with chlorine or on materials that are not acid-resistant. After removing dirt, we recommend rinsing the surface with clean water. The product is suitable for both machine and manual application.

Further information:

- **pH:** 1.2–2.2 depending on dilution
- **Shelf life:** 36 months in a dry environment; protect from frost

LABELLING	USAGE	PACKAGING pcs/box
B.CL801.RX75	750–300 m ² /pack	0.75 l/18 pcs
B.CL801.R005	5000–2000 m ² /pack	5 l



CL802

FOR POST-CONSTRUCTION CLEANING

A concentrated, non-foaming cleaner designed for use on ceramic and granite surfaces. It is suitable for post-construction cleaning, where it achieves excellent results immediately after the first use. It is effective against cement residues, paint dust, cement film, magnesium and mineral deposits – rust and limescale or urine scale. Do not use on non-acid-resistant materials (marble, travertine, etc.). Apply diluted at a ratio of 100–200 ml per 10 l of water, depending on the degree of soiling. **Also suitable for use in food processing facilities.**

Instructions for use: Use 100–200 ml per 10 l of water, depending on the degree of soiling. Failure to adhere to the recommended concentration may cause the grout to lighten. When cleaning after construction, first dampen the surface and then apply the diluted solution. After removing dirt, rinse the surface several times with clean water or CL803 cleaning agent at the specified concentration (this step neutralises the cleaned surface). Do not use in combination with chlorine or on materials that are not acid-resistant. The product is suitable for both machine and manual application.

Further information:

- **pH:** 1.2–2.2 depending on dilution
- **Shelf life:** 36 months in a dry environment; protect from frost

LABELLING	USAGE	PACKAGING pcs/box
B.CL802.RX75	750–300 m ² /pack	0.75 l/18 pcs



CL803

FOR DAILY CLEANING

A product designed to clean and polish not only ceramic surfaces in a single step. It is particularly suitable for surfaces prone to damage and dulling, such as polished marble, granite, and natural and artificial stone. It contains very mild and neutral surfactants that effectively remove even stubborn dirt. Can also be used on plastics. Enhanced shine, improved deep cleaning, surface protection, new fragrance.

Instructions for use: Use 20–60 ml per 10 litres of water, depending on the level of soiling. The product is intended for manual cleaning with a mop or microfibre cloth to achieve a full shine.

Further information:

- **pH:** 7–8 depending on dilution
- **Shelf life:** 36 months in a dry environment; protect from frost

LABELLING	USAGE	PACKAGING pcs/box
B.CL803.RX75	1500–300 m ² /pack	0.75 l/18 pcs
B.CL803.R005	10 000–2000 m ² /pack	5 l



CL804 FOR A HIGH GLOSS

CL804 guarantees a perfectly polished bathroom! It is suitable for cleaning tiles, washbasins, baths, shower cubicles, taps, the exterior of toilet bowls, etc. The product easily removes stains and limescale deposits; it contains a gloss enhancer that slows down surface soiling and improves the appearance of polished and chrome-plated surfaces over the long term. Not suitable for surfaces that are not acid-resistant.

Instructions for use: Apply directly to soiled surfaces, leave for a few minutes, then wash with a sponge or microfibre cloth and rinse with running water. The product is used in concentrated form and is applied using a spray bottle. **Do not allow the product to dry on the surface.**

Further information:

- **pH:** 2
- **Shelf life:** 36 months in a dry environment, protect from frost

LABELLING

B.CL804.RX75
B.CL804.R005

PACKAGING

pcs/box
0.75 l/18 pcs
5 l



CL810 FOR REMOVING GREASE AND OILS

A concentrated, non-foaming formula designed for dilution and industrial cleaning of all hard floor surfaces resistant to water and alkalis, such as PVC, linoleum (including waxed types), glazed and unglazed tiles, granite, marble and limestone surfaces, terrazzo, brick and concrete surfaces (including poured floors), rubber floors, sports hall floors, varnished parquet and floorboards. The product is gentle on the treated surfaces. Direction for use: Dilute 40–100 ml per 10 l of water, depending on the degree of soiling.

Instructions for use: Depending on the degree of soiling, add 40–100 ml to 10 l of water. The product is suitable for both machine and manual application.

Further information:

- **pH:** 9–10 depending on dilution
- **Shelf life:** 36 months in a dry environment, protect from frost

LABELLING

B.CL810.RX75
B.CL810.R005

USAGE

750–300 m²/pack
5000–2000 m²/pack

PACKAGING

pcs/box
0.75 l/18 pcs
5 l



CL809 IMPREGNATION FOR CERAMIC TILES

The product is designed for the impregnation of non-porous materials. It creates a protective layer on the surface that prevents the penetration of water and oils and reduces the accumulation of dirt. This makes the surface easier to clean, ensures a long-lasting improvement in appearance and facilitates the removal of graffiti.

Usage: For polished ceramic floor tiles, kitchen worktops, table tops, window sills, fireplace mantelpieces, etc. **The impregnation does not reduce the slip resistance of the tiles.** Before applying the impregnation, surfaces must be completely free of dirt!

Instructions for use: Apply the impregnation evenly to a thoroughly cleaned and dry surface using a spray bottle. Spread the impregnation evenly with a microfibre mop and leave to dry for 4 hours. If necessary, apply a second layer. The entire surface can be walked on after 6 hours and washed after 24 hours. Usage: 200–300 ml / 10 m².

Further information:

- **pH:** 4–7
- **Shelf life:** 36 months in a dry environment; protect from frost

LABELLING

B.CL809.R001

USAGE

35–50 m²/pack

PACKAGING

1 l/6 pcs



DSDI SOUND-INSULATING BOARD

The material is designed to dampen impact noise and also acts as a separating layer to eliminate shear stress between the tiles and the deforming substrate. When installed directly beneath ceramic tiles, it provides highly effective impact sound insulation up to a thickness of 20 mm, including the tiles. It is part of the RAKO SYSTEM – QUIET TILING system solution.

Further information:

- **Sound reduction:** ΔL_w up to 14 dB
- **Panel dimensions:** 1 000 × 600 × 6 mm
- **Packaging:** 20 pcs (12 m²), or loose panels
- **Storage:** horizontally in a dry place

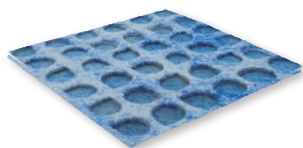
LABELLING

B.DSDI.R001.D6

PACKAGING

pcs/box

0.6 m²/20 pcs



DMEM SEPARATION AND WATERPROOFING MEMBRANE

Separation and waterproofing membrane for cracked, problematic substrates, balconies, terraces and horizontal surfaces of all sizes. When using the DMEM membrane, it is not necessary to create contraction joints in the substrate prior to laying ceramic/stone tiles. DMEM guarantees the installation of all types of flooring and waterproofing surfaces, even when laid over old tiles, on cracked or immature substrates with residual moisture.

Further information:

- **Storage:** do not expose to direct sunlight

LABELLING

B.DMEM.R030

PACKAGING

pcs/box

30 m² roll (1 m wide)/8 pcs



DSAT EXPANSION TAPE

Applied to the contact surfaces of moving joints prior to installing the material on the second contact surface. Allows for both translational and shear movement within the expansion joint. Suitable for perimeter expansion joints prior to the application of levelling compounds and screeds.

Further information:

- **Absorbency:** none
- **Operating temperature:** -40 to +80 °C
- **Available dimensions:** 40/3 mm, 80/3 mm
- **Storage:** in a dry environment

LABELLING

B.DSAT.R050.D40
B.DSAT.R050.D80

width 40 mm
width 80 mm

PACKAGING

50 running metres
50 running metres

DPIS SILICA SAND

Suitable for backfilling outdoor paving into a gravel bed, creating a bonding bridge and bridging cracks in combination with an epoxy coating.

LABELLING

B.DPIS.R025.D1

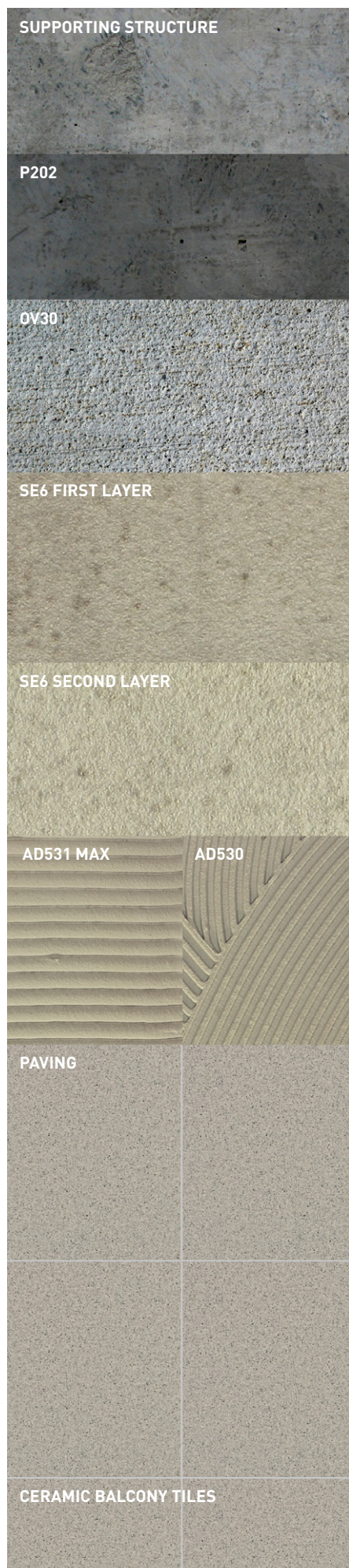
Grain size 0.5-1 mm

PACKAGING

pcs/pallet

25 kg/1050 kg (42 pcs)

SYSTEM SOLUTIONS



CONSTRUCTION:

- PRIMER P201, P202
- DSAT SELF-ADHESIVE EXPANSION TAPE
- BALCONY SCREED OV30, OV35
- SE6 WATERPROOFING COAT IN TWO LAYERS WITH A TOTAL THICKNESS OF AT LEAST 2 MM, OR SE2
- SEALING TAPE SE5, MIN. WIDTH 100 MM
- AD530 OR AD531 MAX ADHESIVE
- CERAMIC TILES INCLUDING BALCONY FILLER
- FLEXIBLE GROUT GFDry, GFBIO
- POLYURETHANE SEALANT SAB + PES SEPARATION CORD

BALCONIES

Balconies are among the most challenging areas for the installation of ceramic tiles. This is because the ceramic tiling is directly exposed to changing weather conditions, which it must withstand. These include significant thermal and moisture loads, which always require expert assessment and professional design documentation. In our balcony system solution, we deal with outdoor floor structures up to approximately 4 m², so no full-surface expansion joint is required! Perimeter expansion is always required (where the wall meets the floor)! Water drainage is achieved by a simple overflow on at least one side, without the need for downpipes. We recommend that balustrade posts are always anchored outside the ceramic tiling.

WORK PROCEDURE

Repair of load-bearing brackets where necessary: When renovating a balcony, it is often necessary to repair the load-bearing brackets after removing the old sloped concrete. Materials from our subsidiary CEMIX are suitable for this purpose.

Substrate priming: Apply **P202** primer to the concrete supporting structure in the appropriate dilution (approx. 1:3). Consumption is approx. 0.15 l/m² of applied liquid.

Creation of the gradient wedge: The floor structure must have a minimum gradient of 2%. We create this using **OV30** screed. We create the bonding layer using bonding bridge **5050** (formerly **P204**), applied with a 6 mm notched trowel, and apply **OV30** screed to the "wet" surface to create the gradient. We separate the screed from the wall using **DSAT** self-adhesive expansion tape. For further information, please contact RAKO SYSTEM specialist dealers.

Insulation: On the sloped surface of the balcony, including the edges, apply **SE6** trowel-applied insulation in two layers to a total thickness of at least 2 mm, with a consumption of approx. 3 kg/m². This creates a permanently flexible insulation layer finished at the edge with micro-drip edges. The interval between individual layers is approx. 4 hours. To bridge transitions, we insert **SE5** tape into the

insulation layer. This must be fully bonded to the **SE6**. Consumption for full contact is approx. 0.30 kg/lm. The structural design of these details is based on the detailed design or following consultation with our technical advisors.

Installation of ceramic tiles: Tiles are laid directly onto the cured insulation screed, i.e. after approx. 1–3 days. For balcony structures, the use of vitrified tiles fitted with a balcony overflow fitting is optimal. This has the same expansion coefficient as the tiles during temperature changes. We install the tiles, including the fittings, using flexible cementitious adhesive **AD530** or **AD531**, class C2TES1. Adhesive **AD531** is suitable for damp environments, has high adhesion, contains antiflorescence components and can be used as a selflevelling adhesive. Self-levelling adhesive minimises the risk of voids forming beneath the ceramic covering. Consumption approx. 5–8 kg/m².

Full-surface grouting of paving: We carry out fullsurface grouting of paving, including edging stones, using a flexible, water-repellent, waterproof **GFDry** or **GFBIO** compound (class CG2WA). Before grouting, we apply masking tape to balcony trims extending approx. 3–5 cm beyond the edge. We select a joint width of at least 4–6 mm. Consumption approx. 0.4–0.8 kg/m².

Sealing of transition joints: To allow for movement in the transition joint of the skirting board, it is necessary to use the permanently flexible **SAB** sealant. When applying the **SAB** compound, it is also necessary to apply a **PES** backing cord. This prevents unwanted adhesion to the bottom of the joint and defines the precise shape of the sealant. The coverage of a 310 ml cartridge is approx. 6–12 running metres, depending on the joint size.

Cleaning: Use cleaning agent **CL802** to remove cement residues.

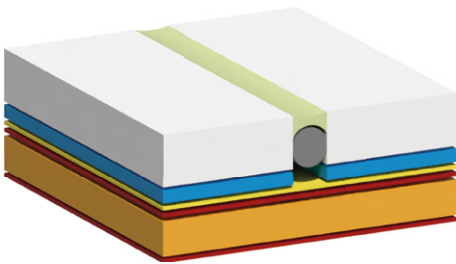
The system has been tested using a special methodology with simulated climatic stress corresponding to a period of 10 years.

Tested by the product certification body TZÚS Praha, s.p., České Budějovice branch, certificate no. 020-033170.



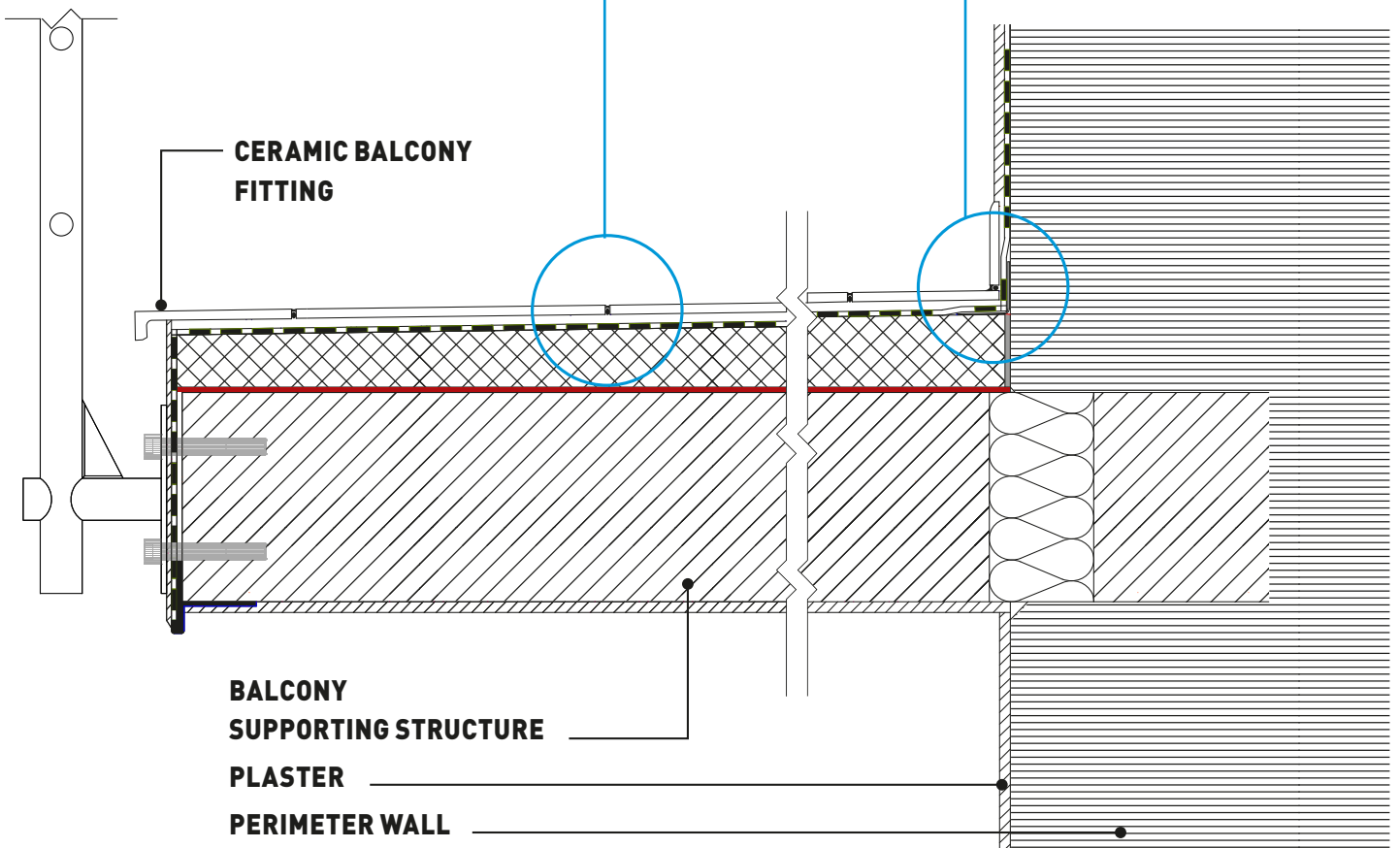
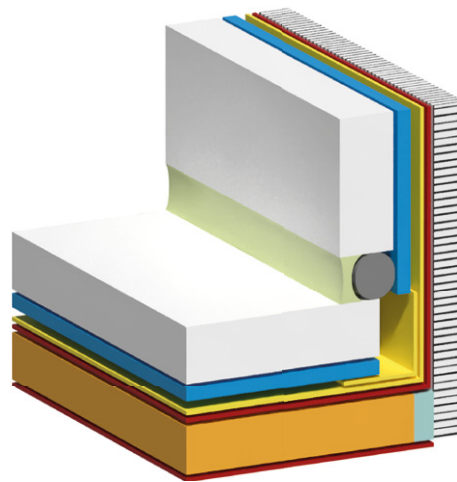
BALCONY EXPANSION JOINT

- SAB + PES
- GFDRI / GFBIO
- CERAMIC TILES
- AD530 / AD531 MAX
- SE6
- P201 / P202
- OV30 / OV35
- 5050 (P204)



BALCONY ANGLE

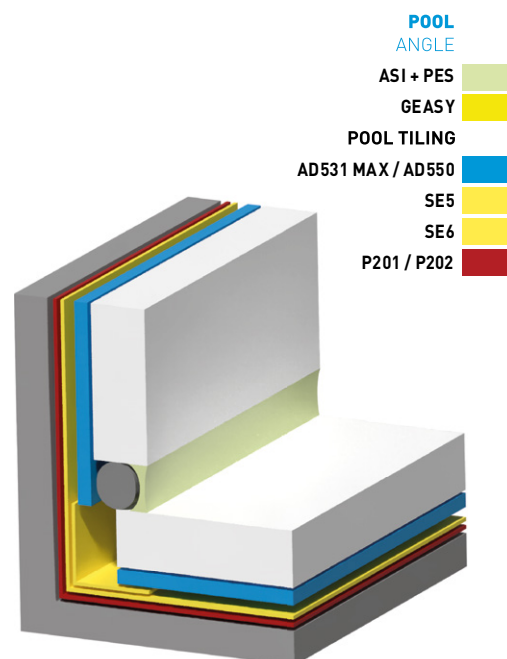
- SAB + PES
- GFDRI / GFBIO
- CERAMIC TILES
- AD530 / AD531 MAX
- SE5
- SE6
- P201 / P202
- OV30 / OV35
- 5050 (P204)
- DSAT





CONSTRUCTION:

- PENETRATION P201, P202
- SE6 WATERPROOFING SCREED WITH A TOTAL THICKNESS OF AT LEAST 3 MM
- SEALING TAPE SE5, MIN. WIDTH 100 MM
- AD531 MAX OR AD550 ADHESIVE
- POOL TILLING (COLOR TWO OR POOL SERIES)
- GEASY EPOXY GROUT
- ASI SILICONE SEALANT + PES SEPARATION CORD



SWIMMING POOLS

Swimming pools are among the most demanding areas for the waterproofing and installation of ceramic tiles due to their exposure to constant water pressure and periodic cleaning. The solution always requires expert assessment and professional project documentation. In swimming pools, we place high demands on the underlying structures, where we unequivocally recommend the use of hydraulic concrete.

WORK PROCEDURE

Preparation: The substrate must meet the properties specified in the project documentation and relevant standards. It must be fully cured with a residual moisture content of up to 4%. The tensile strength must be at least 1.5 MPa. The deviation from flatness of the substrate must not exceed 2 mm over a 2-metre straightedge. In the event of defects, the surface must be levelled using levelling compound **5286** (formerly **LE21**). The surface of the repaired concrete must always be primed with **P201** beforehand.

Waterproofing – perfect sealing of the pool basin, including adjoining structures, gutters and walkways: We carry out waterproofing using **SE6** trowel-applied waterproofing in three layers with a total thickness of 3 mm, at a consumption rate of approx. 4.5 kg/m². This creates a permanently flexible waterproofing layer resistant to water pressure. The interval between individual layers is 4–6 hours. To bridge transitions, expansion joints and reinforce internal corners, we insert **SE5** tape into the waterproofing layer. This must be fully bonded to the **SE6**. Consumption for full contact is approx. 0.3 kg/running metre. We seal penetrations using flexible polyurethane sealant **SAB**. The design of these details is based on the implementation plan or on consultation with our technical advisors.

Leak test prior to proceeding with further work to allow for any necessary repairs – water immersion test: The entire insulation system is ready for the water immersion test only after it has fully cured, i.e. after 7 days.

Installation of ceramic tiles on an insulating screed: Pool tiles can be bonded using various types of adhesive mortars. The utmost care must always be taken, as repairs during direct installation onto the insulation layer are highly risky. We always use the double-sided adhesive application method (butteringfloating) to ensure void-free contact between the tiles and the substrate, and we observe expansion joints. For standard pool tile formats, we use **AD531** cementitious adhesive, class C2TE S1; for smaller formats and mosaics, we use **AD550** white adhesive, class C2TE S1. We recommend bonding the non-ceramic materials directly using **GEASY** epoxy adhesive. Sealant consumption ranges from 2.5 to 5 kg/m².

Grouting the ceramic cladding with a compound chemically resistant to the disinfectants used during pool operation: For grouting, we use the chemically resistant **GEASY** RG-class epoxy grout, available in three colour shades. This material, with an improved formulation, offers significantly improved washability when grouting! The adhesive must be fully cured and the joint must be clean and dry. The consumption of this compound is approx. 1–1.8 kg/m² depending on the size of the tiles.

Sealing of penetrations and transitions with permanently flexible sealant: To allow movement in the expansion joint, **ASI** sanitary silicone must be used. The coverage of a 310 ml cartridge is approx. 5–12 running metres, depending on the joint width. The colour range covers all **GEASY** compound colours. When applying **ASI** silicone, it is necessary to use a **PES** backing cord. This prevents unwanted adhesion to the bottom of the joint and defines the precise shape of the silicone.

Cleaning and maintenance: For routine maintenance, use cleaning agent **CL803** in combination with **CL802** (limescale) and **CL810** (grease). A cleaning schedule must be drawn up for these areas. Poor cleaning promotes the accumulation of dirt and causes a deterioration in anti-slip properties.

POOL
EXPANSION JOINT

ASI + PES

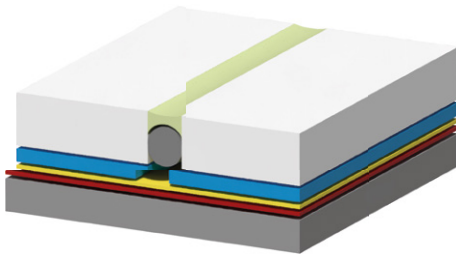
GEASY

POOL TILING

AD531 MAX / AD550

SE6

P201 / P202



CERAMIC TILES ON METAL CONSTRUCTION:

Nowadays, there is an emphasis on unifying surfaces clad with ceramic materials, and for this reason, there is a demand for bonding tiles to non-standard substrates (such as steel staircases, lift cabins, etc.). Metal is a very challenging substrate for ceramics due to its different coefficient of thermal expansion compared to ceramics. For these purposes, we have developed the following solution.

WORK PROCEDURE

Preparation: The metal substrate must be solid and fully reinforced to prevent deformation and deflection. The surface of metal substrates must be cleaned of grease, any rust removed, and treated with an anti-corrosion coating. An epoxy coating mixed with silica sand is then applied. In certain cases, a bonding primer based on synthetic dispersion and mineral filler **P203** may be used. Once the material has fully cured, the next layer can be bonded.

Installation of ceramic tiles: For the installation of ceramic tiles, we use **GEASY** two-component epoxy adhesive. If soundproofing is required, we use the DSDI sound insulation panel.

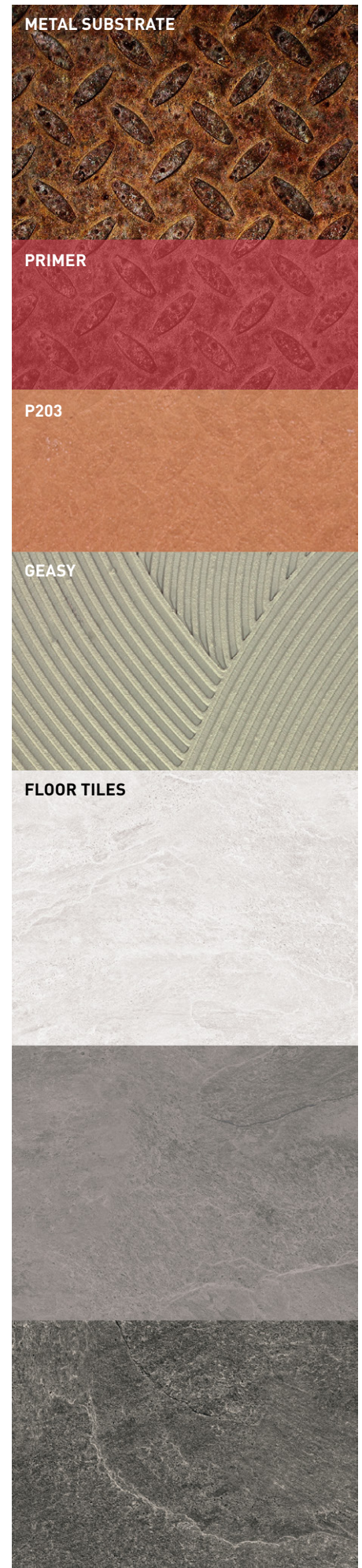
Grouting the tiled surface: Once the adhesive has cured, we grout the entire surface using **GEASY** RG-grade epoxy grout.

Sealing flexible joints and penetrations with permanently flexible sealant: To allow for expansion movement in the joint, it is necessary to use **ASI** permanently flexible sealant. When applying **ASI**, it is advisable to use **PES** backing tape. This prevents unwanted adhesion to the bottom of the joint and defines the precise shape of the silicone fill.

Cleaning: To remove cement residues, use cleaning agent **CL802**. After thoroughly cleaning the surface, we recommend carrying out full-surface impregnation with **CL809**.

Maintenance: For routine maintenance, use cleaning agent **CL803** in combination with **CL801** (limescale) and **CL810** (grease).

- CONTACT BRIDGE
- GEASY EPOXY ADHESIVE
- CERAMIC FLOOR OR WALL TILES
- GEASY EPOXY GROUT
- ASI SILICONE SEALANT + PES SEPARATION CORD





COMPOSITION::

- PENETRATION P201, P202
- SE1, SE6 WATERPROOFING TROWEL
- SEALING TAPE SE5, MIN. WIDTH 80 MM
- AD510 ADHESIVE NEWS
- CERAMIC TILES
- GROUT GFDRY, GFBIO
- SILICONE SEALANT ASI + PES SEPARATION CORD

BATHROOM ANGLE

ASI + PES

GFDRY / GFBIO

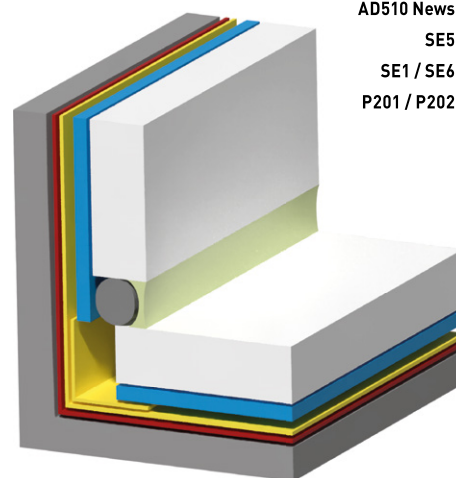
CERAMIC TILES

AD510 News

SE5

SE1 / SE6

P201 / P202



BATHROOM

Areas subject to short-term but repeated moisture exposure can place excessive strain on the underlying structure and, in the event of moisture penetration, provide an ideal environment for the growth of microorganisms. For these reasons, it is essential to prevent water from penetrating the substrates. We therefore recommend adhering to the following procedures and material compositions:

WORK PROCEDURE

Preparation: The substrate must be solid, fully cured, and free of dirt and unevenness. In the event of defects, use material **5286** (formerly **LE21**) for levelling walls and floors.

Priming of absorbent substrates: Prime all absorbent substrates with **P201**. For highly absorbent materials, use **P202** in the appropriate dilution (approx. 1 : 3-5). Consumption is 0.15-0.25 l/m² of applied liquid.

Waterproofing – sealing of all areas subject to water exposure: We waterproof the primed surfaces with two coats of **SE1**, allowing a drying time of 4-6 hours between coats. The surface is walkable and ready for bonding after approx. 10-12 hours. Total consumption is approx. 1.2-1.6 kg/m². To bridge transitions, expansion joints and reinforce internal corners, insert **SE5** tape into the waterproofing layer, which must be fully bonded to the **SE1** across the entire surface. Estimated consumption is approx. 0.25 kg/running metre. In shower cubicles where a shower tray is not used but ceramic tiles are, waterproofing must be carried out using **SE2** or **SE6**.

Installation of ceramic wall and floor tiles on the waterproofing layer: Modified adhesive mortars must be used for installing wall and floor tiles. For standard formats in our residential ceramic range, we use **AD510 News** cementitious adhesive, class C2T. Adhesive consumption ranges from 2 to 6 kg/m² depending on the format cladding elements.

Grouting the ceramic cladding: For grouting, we use the flexible compound **GFBIO** or **GFDRY**, both of category CG2WA. Thanks to special additives, these grouting compounds offer enhanced water repellency; **GFBIO** also provides protection against the formation of mould and efflorescence. This significantly improves the hygiene of the entire surface! Consumption is approx. 0.3-0.8 kg/m² depending on the size of the tiles.

Sealing of flexible joints and penetrations with permanently flexible sealant: To allow for expansion movement in the joint, it is necessary to use **ASI** permanently flexible sealant. The colour range covers all colours of the **GFDRY** series. When applying **ASI** sealant, it is advisable to use a **PES** backing cord. This prevents unwanted adhesion to the bottom of the joint and defines the precise shape of the silicone fill. The coverage of a 310 ml cartridge is approx. 6-12 running metres depending on the joint size.

Cleaning: Use cleaning agent **CL802** to remove cement residues. After thoroughly cleaning the surface, we recommend applying a full-surface impregnation with **CL809**.

Maintenance: For routine maintenance, use cleaning agent **CL804** (tiles, taps, sanitaryware, etc.) and **CL803** for floors.

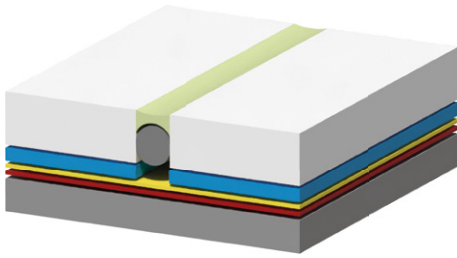
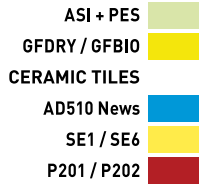


„BIO EFFECT“
s obsahem biocidů



„DRY EFFECT“
deklarace nenásákavosti

BATHROOM EXPANSION JOINT



TILING CERAMIC TILES ONTO EXISTING TILES

During renovations, we address the installation of ceramic tiles over existing old tiling. In most cases, with ceramic tiles, it is necessary to ensure proper adhesion to the substrate and to level out any unevenness. It is therefore necessary to use a bonding agent, which ensures the adhesion of the new tiles and their interaction with the substrate. The following system ensures the long life of the new tiles as well as their aesthetic function.

WORK PROCEDURE

Preparation: Before installation, the substrate must have sufficient strength and cohesion; in other words, if the existing tiling shows visible defects (it is not adhering to the wall, sounds hollow when tapped, the existing grout is crumbling, etc.), the loose and damaged surface must be removed. Apply a bonding primer using **P203** or **5050** (formerly **P204**) to existing wall and floor tiles that have been cleaned of dirt and grease (**CL810**) on both walls and floors. The deviation from flatness of the substrate must not exceed 2 mm over a 2-metre straightedge. This flatness is achieved on walls using levelling compound **5286** (formerly **LE21**) and on floors using self-levelling compound **LE20**. Defects in wall tiling can be locally repaired with a layer of the adhesive used.

Waterproofing – sealing of all areas subject to water: see the bathroom system solution.

Installation of ceramic wall and floor tiles: For the installation of wall and floor tiles, it is necessary to use modified flexible adhesive mortars, **AD530**, **AD550**. Adhesive consumption ranges from 3 to 6 kg/m². Grouting of the ceramic cladding: When grouting we use flexible grout **GFDRY** or **GFBIO**, both CG2WA grade. Thanks to special additives, these grouts offer enhanced water repellency; **GFBIO** also provides protection against the formation of mould and efflorescence. This significantly improves the hygiene of the entire surface!

CONSTRUCTION:

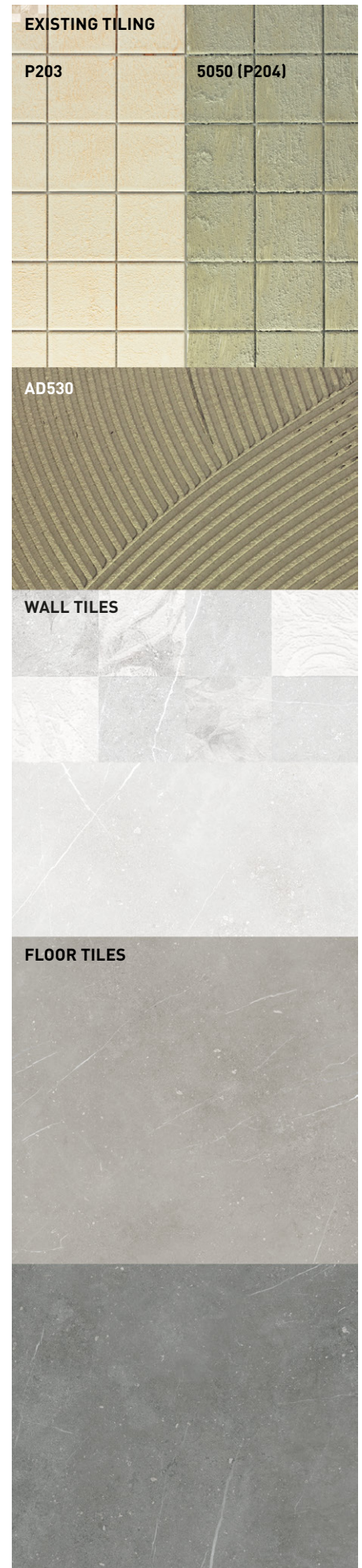
- CONTACT BRIDGE **P203** OR **5050** (FORMERLY **P204**)
- FOR FLOORS IF NECESSARY LEVELLING WITH SELF-LEVELLING COMPOUND **LE20**
- **AD530**, **AD550** ADHESIVE
- CERAMIC FLOOR OR WALL TILES
- FLEXIBLE GROUT **GFDRY**, **GFBIO**
- **ASI** SILICONE SEALANT + **PES** SEPARATION CORD

Consumption is approx. 0.3–0.8 kg/m² depending on the size of the cladding elements.

Sealing of flexible joints and penetrations with permanently flexible sealant: To allow for expansion movement in the joint, it is necessary to use **ASI** permanently flexible sealant. The colour range covers all colours of the GF series. When applying **ASI** sealant, it is advisable to use a **PES** backing cord. This prevents unwanted adhesion to the bottom of the joint and defines the precise shape of the silicone fill. The coverage of a 310 ml cartridge is approx. 6–12 running metres, depending on the joint size.

Cleaning: To remove cement residues, use cleaning agent **CL802**. After thoroughly cleaning the surface, we recommend applying a full-surface impregnation with **CL809**.

Maintenance: For routine maintenance, use cleaning agent **CL803** in combination with **CL801** (limescale) and **CL810** (grease).





CONSTRUCTION – FLEXIBLE SUBSTRATE:

- OSB (CETRIS) BOARDS IN TWO LAYERS
- P203 CONTACT BRIDGE
- DSAT SELF-ADHESIVE EXPANSION TAPE
- AD530 ADHESIVE
- DSDI PANEL
- AD530 ADHESIVE
- CERAMIC TILES
- FLEXIBLE GROUT GFDRY, GFBIO
- ASI SILICONE SEALANT + PES SEPARATION CORD

SILENT TILLING

The SILENT TILLING system provides a simple solution for laying ceramic tiles on flexible, non-standard substrates (e.g. wooden ceiling structures with chipboard flooring, parquet floors, etc.). The **DSDI** separation panel inserted between the ceramic tiles and the substrate eliminates the possibility of shear stress arising from excessive deformation in floor structures. Thanks to its structure, this panel also provides acoustic damping and can be used as impact sound insulation.

WORK PROCEDURE

Preparation: When creating substrates from OSB boards, we recommend installing two layers, 18 mm and 15 mm thick, laid in a staggered joint pattern. Both layers are then securely joined by screwing. Concrete and anhydrite substrates must demonstrate sufficient strength and cohesion. The deviation from flatness of the substrate must not exceed 2 mm over a 2 m straightedge. In the event of deficiencies, the selflevelling compound **LE20** must be used.

Substrate priming: On flexible and deformable substrates (Cetris, OSB), apply a bonding agent using **P203** filler-containing primer. The estimated consumption of the bonding primer is 0.25–0.4 kg/m². Absorbent surfaces of floor structures (concrete, anhydrite) must be primed with **P202** coating in the appropriate dilution (approx. 1 : 3–5). Consumption approx. 0.15 l/m² of applied liquid.

Installation of the perimeter expansion strip: Apply a 25 mm wide DSAT self-adhesive expansion strip to the wall around the perimeter of the area. This separates the applied system from the perimeter walls and simultaneously breaks any acoustic bridges between the tiles and the wall.

Installation of the separation panel: Install the **DSDI** panel using **AD530** adhesive. Use a 3–4 mm notched trowel with a consumption of approx. 2.1 kg/m². We recommend covering the joints between the panels with narrow paper tape with tape, which ensures the panels function correctly and prevents the formation of an acoustic bridge when laying the tiles.

CONSTRUCTION – ACOUSTIC INSULATION:

- PENETRATION P201, P202
- DSAT SELF-ADHESIVE EXPANSION TAPE
- SELF-LEVELLING COMPOUND LE20
- AD530 ADHESIVE
- DSDI PANEL
- AD530 ADHESIVE
- CERAMIC TILES
- FLEXIBLE GROUT GFDRY, GFBIO
- ASI SILICONE SEALANT + PES SEPARATION CORD

Waterproofing – sealing all areas subject to water exposure: We carry out waterproofing on the installed **DSDI** panels using **SE1** waterproofing compound and **SE5** sealing tape; see the bathroom system solution.

Installation of ceramic tiles: For the installation of ceramic tiles, we again use **AD530** cementitious adhesive, which is walkable after 12–24 hours. A 8–10 mm-thick layer is applied; consumption for tiling is approx. 4.2–6 kg/m².

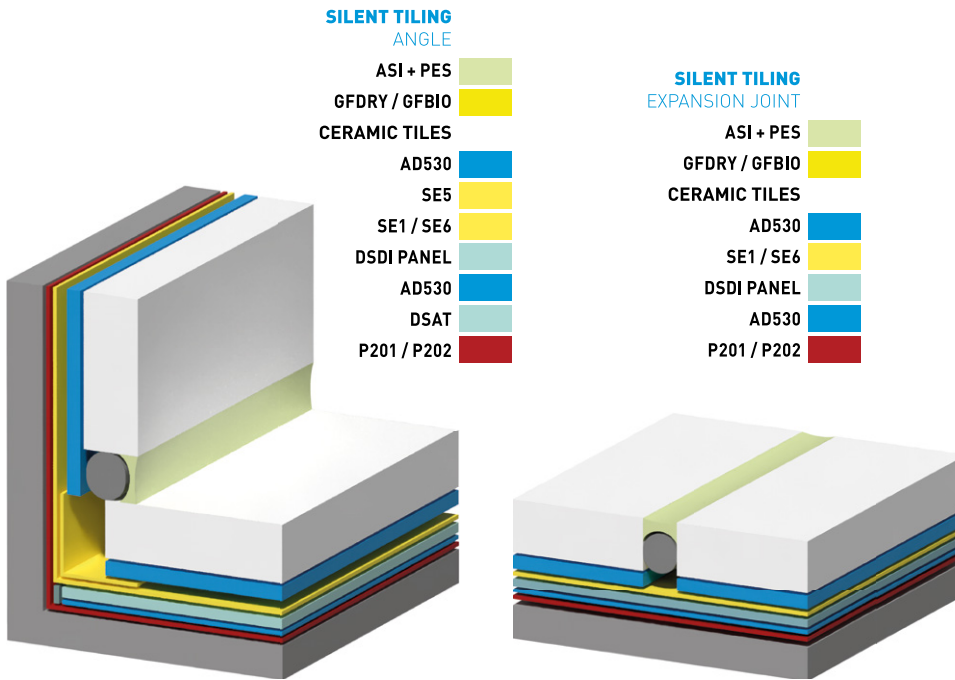
Grouting the tiled surface: Once the adhesive has cured, we grout the entire surface with **GFDRY** CG2 WA cementitious grout, available in a full colour range of 24 colours. Consumption approx. 0.4–0.8 kg/m².

Sealing expansion joints: In the perimeter joint to the skirting boards and in expansion joints, it is necessary to use permanently flexible **ASI** silicone sealant, available in the same colour range as **GFDRY**. When applying **ASI** sealant, it is advisable to use a **PES** backing cord. This prevents unwanted adhesion to the bottom of the joint and defines the precise shape of the silicone. The coverage of a 310 ml cartridge is approx. 6–12 running metres, depending on the size of the joint.

Cleaning: To remove cement residues, use cleaning agent **CL802**. After thoroughly cleaning the surface, we recommend applying a full-surface impregnation with **CL809**.

Maintenance: For routine maintenance, use cleaning agent **CL803** in combination with **CL802** (limescale) and **CL810** (grease).

The acoustic attenuation when combined with a DSDI panel depends on the overall composition of the ceiling structure. Experience shows that the acoustic attenuation achieved is around 14 dB.



NATURAL STONE

When installing natural stone slabs, care must be taken to select the correct material during installation. This choice depends on the structure of the stone, as this determines whether the material is susceptible or not to staining.

WORK PROCEDURE

Preparation: The substrate must be solid, cured, free of dirt and unevenness. In the event of defects, use material **5286 (LE21)** for levelling walls and floors. Priming absorbent substrates: Prime all absorbent substrates with **P201**. For highly absorbent materials, use **P202** in the appropriate dilution (approx. 1 : 3–5). Consumption 0.15–0.25 l/m² of applied liquid.

Installation of stone cladding: For the installation of stone slabs, it is necessary to use modified flexible adhesive mortars, which are selected according to the stone's sensitivity to discolouration of the substrate. For non-sensitive materials (granite), apply grey **AD530** adhesive, class C2TES1; for sensitive materials (marble, limestone, quartz), use white **AD550** adhesive, class C2TE S1. We recommend using the double-sided adhesive application method (buttering-floating) to ensure void-free contact between the stone and the substrate. Adhesive consumption ranges from 4 to 7 kg/m².

Grouting the stone surface: Once the adhesive has cured, we grout the surface with **GF** cementitious grout, class CG2 WA, available in a full colour range of 18 shades. We recommend using a grout colour that matches the shade of the installed stone. Consumption approx. 0.4–0.8 kg/m².

Cleaning and maintenance: Cleaning depends on the type of stone. For routine maintenance, use the neutral cleaner **CL803**.

COMPOSITION:

- **PENETRATION P201, P202**
- **AD530 OR AD550 ADHESIVE**
- **FLEXIBLE GROUT GFDRIY, GFBIO**
- **SILICONE SEALANT ASI + PES SEPARATION CORD**





CONSTRUCTION:

- **P201, P202 PRIMERS**
– CONCRETE, ANHYDRITE
- **CONTACT BRIDGE P203**
– ORIGINAL TILING
- **AD530 OR AD531 MAX ADHESIVE**
- **DMEM MEMBRANE**
- **AD530 OR AD531 MAX ADHESIVE**
- **CERAMIC TILES**
- **FLEXIBLE GROUT GFDRY, GFBIO**
- **ASI SILICONE SEALANT + PES SEPARATION CORD**

SEPARATION AND WATERPROOFING MEMBRANE DMEM

When laying tiles, we are often faced with the question of whether they can be safely laid on the existing substrate. In many cases, the use of the **DMEM** separation and waterproofing membrane provides a positive answer to this question.

What is DMEM?

The membrane is made of polyethylene, featuring circular cavities, and is coated on both sides with nonwoven, thermoformed polypropylene material. Thanks to the membrane's thickness of 3.5 mm, it can accommodate movement between the substrate and the paving of 2–3 mm horizontally and 1 mm vertically.

Applications of the DMEM membrane:

- **Installation on cracked concrete without the need for stitching – high frequency of cracks in the substrate** – eliminates the need to remove the existing substrate and create a new one
- **Installation over contraction joints in concrete without the need for stitching** – no need to transfer the substrate's expansion joints to the paving installation
- **Laying on existing paving with the option to ignore intermediate expansion joints** – possibility of laying new paving of any format
- **Installation on fresh, uncured concrete** – significant time savings, as there is no need to wait 28 days for the concrete to cure
- **Laying on wood-fibre OSB and Cetris boards** – suitable for timber-framed buildings and renovations
- **Laying of large-format tiles on problematic substrates** – reduces the risk of tile cracking due to the substrate
- **Installation over underfloor heating with half the usual screed thickness and without covering heated areas or loops** – the membrane distributes heat evenly beneath the tiles
- **Installation meets waterproofing requirements** – when used with RAKO SYSTEM construction chemicals, the membrane provides 100% waterproofing

- **Even distribution of point loads from the tiles into the substrate** – the membrane does not restrict the load on the tiles
- **Moisture and vapour are drawn away from the substrate via a labyrinth beneath the membrane** – this prevents pressure from being created on the laid paving.

WORK PROCEDURE

Preparation: Concrete and anhydrite substrates must demonstrate sufficient strength and cohesion; any cracks that have formed are not an obstacle. The deviation from flatness of the substrate must not exceed 2 mm over a 2 m straightedge. In the event of unevenness, **LE20** self-levelling compound must be used. On a substrate with existing paving, the paving must not be loose or detached from the substrate. If this is the case, remove the tiles and fill the gaps with a self-levelling compound or flexible adhesive sealant suitable for laying **DMEM** or new tiles. For substrates made from OSB boards, we recommend installing two layers of 18 mm and 15 mm thickness, laid in a staggered joint pattern. Secure both layers firmly with screws.

Substrate priming: Absorbent surfaces of floor structures (concrete, anhydrite) must be primed with **P202** primer in the appropriate dilution (approx. 1 : 3–5). Coverage is approx. 0.15 l/m² of applied liquid. On existing tiles and deformable substrates (Cetris, OSB), apply a bonding primer using **P203** primer containing filler. The estimated consumption of the bonding primer is 0.25–0.4 kg/m².

Installation of the separation membrane: Unroll the membrane 30 minutes before laying and prepare it to size. We install the **DMEM** membrane using **AD530** flexible adhesive, class C2TE S1 (creates a minimal contact layer). We use a 6 mm notched trowel with a consumption of approx. 2.5 kg/m². We carefully press the membrane into the adhesive with a roller and lay the strips butt-jointed. If a waterproofing layer is required, use 120 mm wide **SE5** tape to seal the joints and **SE2** or **SE6** two-component waterproofing compound.

Installation of ceramic tiles: For installing ceramic tiles, use **AD530** cementitious adhesive or **AD531 MAX** adhesive (class C2TE S1) designed for largeformat tiles.

Grouting the tiled surface: Once the adhesive has cured, we grout the entire surface with **GFDRY** cementitious grout, class CG2 WA, available in a full colour range of 24 colours, or alternatively **GFBIO**. Consumption is approx. 0.4–0.8 kg/m².

Sealing expansion joints: In the perimeter joint to the skirting boards and in intermediate and structural expansion joints, it is necessary to use permanently flexible **ASI** silicone sealant, available in the colour range of **GFDRY**, or **SAB** polyurethane. When applying **ASI** or **SAB** sealant, it is advisable to use a **PES** backing cord. This prevents unwanted adhesion to the bottom of the joint and defines the precise shape of the sealant. A 310 ml cartridge covers approx. 6–12 m, depending on the size of the joint.

Cleaning: Use **CL802** cleaner to remove cement residues. After thoroughly cleaning the surface, we recommend treating the entire surface with **CL809**.

Maintenance: For routine maintenance, use cleaning agent **CL803** in combination with **CL801** (limescale) and **CL810** (grease).

CONSTRUCTION:

- **PENETRATION P201, P202**
- **SEALANT COAT SE1**
- **SEALING TAPE SE5, MIN. WIDTH 80 MM**
- **AD510 NEWS, AD530, AD550 ADHESIVE**
- **CERAMIC FLOOR OR WALL TILES**
- **FLEXIBLE GROUT GFDRY, GFBIO**
- **ASI SILICONE SEALANT + PES SEPARATION CORD**

CLADDING OF STRUCTURES MADE OF PLASTERBOARD

When tiling drywall structures, it is necessary to take into account their flexibility and the adaptability of the materials – in this case, ceramic tiles – to accommodate movement in the structure. We therefore ensure high-quality substrate preparation and use flexible materials for installation.

WORK PROCEDURE

Preparation: The substrate must be solid, free of dirt and unevenness.

Priming the substrate: For plasterboard, treat its absorbency with undiluted **P201** primer. For highly absorbent materials, use **P202** in the appropriate dilution (approx. 1:3–5). Consumption: 0.15–0.25 l/m² of applied liquid.

Waterproofing – sealing of all areas subject to water exposure: see the bathroom system solution.

Installation of ceramic wall and floor tiles on the waterproofing layer: Modified adhesive mortars must be used for installing wall and floor tiles. For standard formats in our residential ceramic range, we use **AD510 News** cementitious adhesive (class C2T) or the fully flexible adhesives **AD530** or **AD550**. Adhesive consumption ranges from 3 to 6 kg/m².

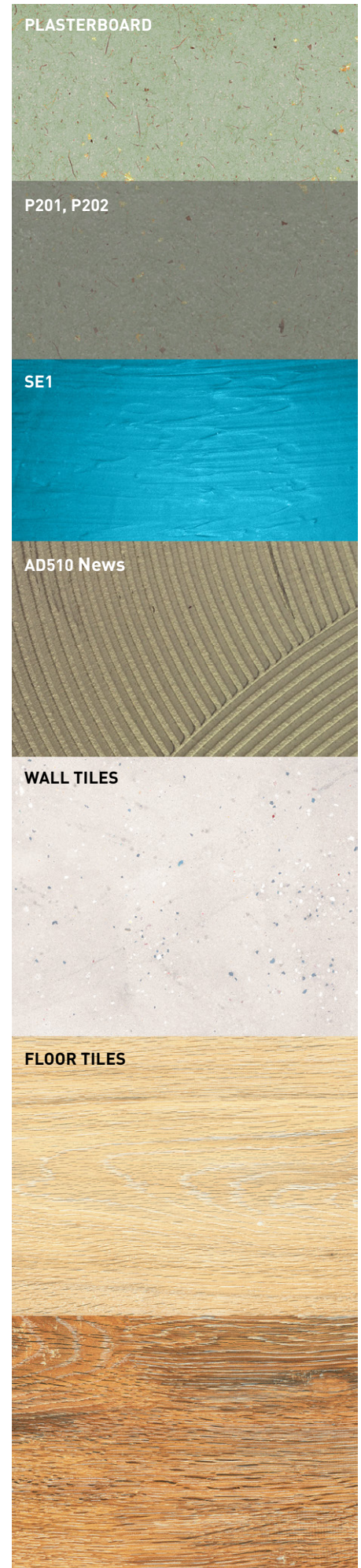
Grouting the ceramic cladding: For grouting, we use the flexible compound **GFDRY** or, alternatively, **GFBIO**, both of category CG2WA. Thanks to special additives, these grouting compounds offer enhanced water repellency; **GFBIO** also provides protection against the formation of mould and efflorescence. This significantly improves the hygiene of the entire surface! Consumption approx. 0.3–0.8 kg/m² depending on the size of the tiles.

Sealing of flexible joints and penetrations with permanently flexible sealant: To allow for expansion movement in the joint, it is necessary to use **ASI** permanently flexible sealant. The colour range covers all colours of the **GF** series compounds.

When applying **ASI** sealant, it is advisable to use a **PES** backing cord. This prevents unwanted adhesion to the bottom of the joint and defines the precise shape of the silicone fill. The coverage of a 310 ml cartridge is approx. 6–12 running metres, depending on the joint size.

Cleaning: Use cleaning agent **CL802** to remove cement residues. After thoroughly cleaning the surface, we recommend treating the entire surface with impregnating agent **CL809**.

Maintenance: For routine maintenance, use cleaning agent **CL803** or **CL804**.



CONSTRUCTION CHEMICALS USED:

- **PENETRATION P201, P202**
- **SCREEDS – FOR FLOORS SELF-LEVELLING LE20 – FOR WALLS 5286 (LE21)**
- **AD560, AD531 MAX ADHESIVE**
- **FLEXIBLE GROUT GFDRY, GFBIO**
- **FLEXIBLE SEALANT**
 - **INTERIOR – SILICONE ASI + PES SEPARATION CORD**
 - **EXTERIOR – POLYURETHANE SAB + PES SEPARATION CORD**

BONDING OF LARGE-FORMAT TILES

Large-format tiles are currently in vogue in both private and public buildings. LASSELSBERGER s.r.o. is responding to current client demands by maximising the size of its tiles. The range includes 120 × 120, 60 × 120, 80 × 80, 40 × 80, 60 × 60, 20 × 120) and tiles in the 40 × 120 cm format. The current era of large-format tiles presents a challenge for many tiling firms, both technically and in terms of craftsmanship.

WORK PROCEDURE

1. Substrate: The concrete substrate must have cured for at least 28 days and have a residual moisture content of less than 5%. For anhydrite screeds, the residual moisture must be kept below 0.5%, and for underfloor heating systems below 0.3%. The substrate must be sound, free of dirt and unevenness. To even out the absorbency of the substrate, use **P202** primer in the appropriate dilution (approx. 1 : 3–5), or **P201** deep primer undiluted.

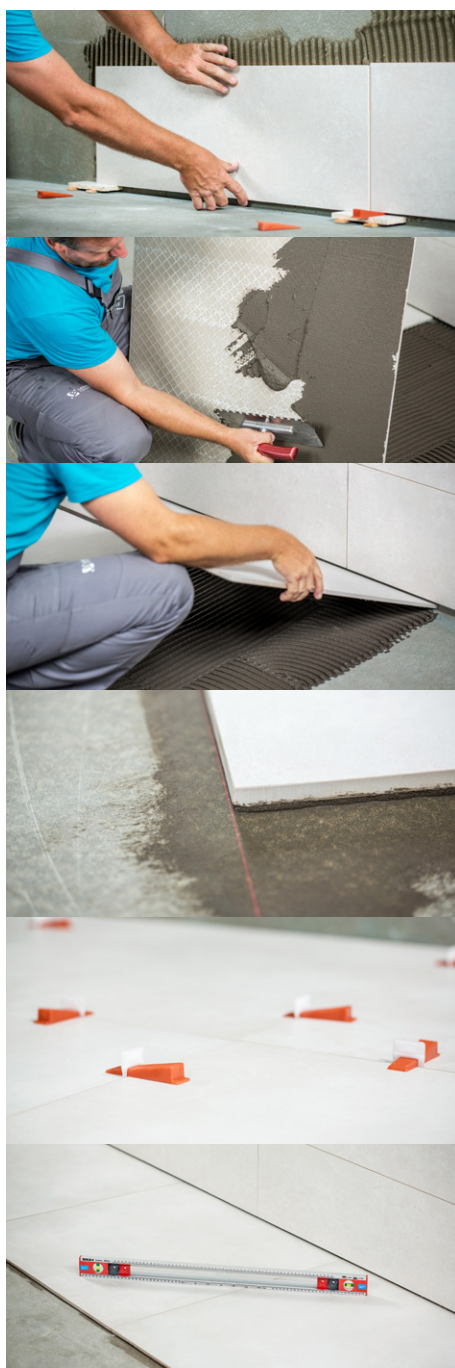
2. Substrate levelling: Laying large-format ceramic tiles in a thin-bed system places high demands on substrate levelling, where even the permitted tolerance of 2 mm over a 2-metre straightedge may indicate unevenness. Levelling is achieved using trowels or self-levelling compounds. After priming the substrate, we use the self-levelling compound **LE20** with optimal flow for floor levelling. For walls, the levelling compound **5286** (formerly **LE21**) is suitable.



3. Layout of the joint pattern: This step is one of the most important before the actual installation. A cross-line laser level ensures precise measurement of the installation along walls and floors. When marking out the joint layout against walls, we must strictly adhere to the principles of cutting in corners (larger than $\frac{1}{2}$ the tile size); for floors, we must take into account structural and building expansion joints in the substrate, which will be reflected in the joint layout across their entire width.

4. Bonding large-format floor tiles: For installing wall tiles, we use **AD510 News** adhesive mortar; for floor tiles from 60×60 cm in size, **AD531 MAX** type C2TES1 adhesive mortar is suitable. **AD560** C2TS1 adhesive is designed for large formats. This adhesive has enhanced properties suitable for large formats – high adhesion and flexibility (class S1), easy workability, high slip resistance, a long open time, **curing without air exposure, and guaranteed resistance to efflorescence**. This adhesive is also suitable for bonding tiles up to 120×120 cm in size outdoors. A key principle when laying larger-format tiles is to create a contact layer of adhesive on the back of the tile, known as two-contact bonding – butteringfloating. Spread the adhesive with a notched trowel in one direction, starting from the edge where the tiles are to be laid. The joint width should not be less than 2 mm.

5. Grouting: Grouting can only be carried out once the adhesive has cured, at least 2 days after the tiles have been laid; for vitrified non-absorbent wall and floor tiles, after 3–4 days; and for non-absorbent substrates, after 5–7 days. For grouting the laid ceramic tiles, we use the flexible compound **GFBIO** or, alternatively, **GFDRY**, both of category CG2WA. As with all formats, it is essential to strictly observe both perimeter and intermediate expansion joints during installation. Inter-row expansion joints must be provided in areas of max. 6×6 m and, in the case of underfloor heating, max. 3×3 m. These flexible expansion joints are created only after grouting, where we insert **PES** separating cord into the cleaned joints to ensure their proper function, followed by **ASI** silicone for interiors and **SAB** polyurethane for exteriors.



CLASSIFICATION OF ADHESIVES ACCORDING TO EN 12004+A1

Adhesives for cladding elements are divided into three types according to their base material:

- **C** cement-based
- **D** dispersion
- **R** made from reactive resins

Each type may have different classes, into which it is classified based on various characteristics:

- **1** standard adhesive for general use (adhesion in all specified environments: min. 0.5 MPa)
- **2** enhanced adhesive for more demanding applications (adhesion in all specified environments: min. 1.0 MPa)
- **F** fast-curing (min. 0.5 MPa after 6 hours)
- **T** adhesive with reduced slip (slip max. 0.5 mm when using standard ceramic elements with water absorption ≤ 0.5%)
- **E** adhesive with extended setting time – open time (adhesion min. 0.5 MPa 30 minutes after application of the adhesive to the standard substrate)
- **S1** deformable adhesive (deflection in the range ≥ 2.5 mm and < 5 mm)
- **S2** highly deformable adhesive (deflection ≥ 5 mm)

CLASSIFICATION OF GROUTS ACCORDING TO EN 13888

Grouts for cladding elements are divided into two types according to their base material:

- **CG** cement-based
- **RG** from reactive resins

Cementitious grouts (mortars) can be found in various classes, into which they are classified based on additional characteristics:

- **1** standard jointing compound (mortar)
- **2** improved grout (mortar) – meets the requirements for additional characteristics:
 - **A** high abrasion resistance (≤ 1 000 mm³)
 - **W** reduced water absorption (after 30 minutes ≤ 2 g; after 240 minutes ≤ 5 g)

Formula for calculating the consumption of jointing

compoundsmot



$$\frac{A+B}{A \times B} \times C \times D \times k = \text{kg/m}^2$$

A = length of cladding in mm
 B = tile width in mm
 C = tile thickness in mm
 D = joint width in mm
 k = density in g/cm³ (1.60)

FIELD OF APPLICATION



Exterior + interior



Exterior



Interior



Floor + wall + ceiling



Floor



Exterior + interior



Ceiling



For damp areas



For swimming pools and tanks



Complies with the WTA guideline



Suitable for historic buildings

HEATING AND COOLING SECTOR:



Floor + wall



Wall + ceiling



Floor



Wall



Ceiling

PROPERTIES:



Vapour-permeable



UV-resistant



Frost-resistant



Moisture absorbing



Waterproofing

PROCESSING CONDITIONS:



Temperature



Air humidity



Temperature + air humidity

PROCESSING:



Machine



Manual + machine



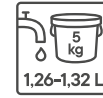
Manual



By brush or roller consumption



Water



Water consumption



Water consumption



Mixing time + mixing speed



Settling time



Layer thickness



Layer thickness



Workability



Workability



Rain resistance



Tileability



Jointability



Component ratio

MATERIAL CONSUMPTION BY APPLICATION:



Shelf life



Supplied to order



Bulk material



Protective mask



Gloves



Gloves + protective mask



LASSELSBERGER, s.r.o.
Adelova 2549/1, 320 00 Plzeň
Czech Republic, T: +420 800 303 333
E: info@rako.cz, www.rako.eu

