Bathroom System

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The bathroom is typically the place where humidity and dampness are higher. Some areas are exposed to direct contact with water. We expect the bathroom to meet stricter hygiene requirements. Moving even further, it is becoming trendy to arrange bathing rooms, which means we want our bathroom to be as comfortable, warm, and cosy, as the sitting room or bedroom. All those expectations call for using specialist materials to address the challenges.

In technical terms, considering hygiene and use, the bathroom should be:
- tiled and grouted so as to achieve continuous, impermeable surface resistant to soiling, discoloration, efflorescence or mould, and easy to clean.
- sealed to prevent flooding of the room below, and the soaking of the plaster and floor beams directly beneath the tiles.
- designed so as to enable tension compensation, especially if the heating installation is embedded in the walls or the floor, otherwise the tiles may loosen.

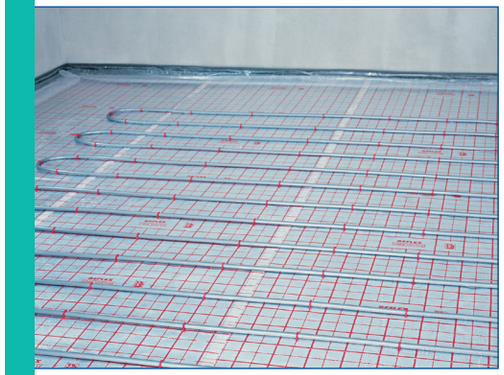
The ATLAS products will meet the expectations. POSTAR 20, the cement screed, will cover the heating installation. The ATLAS WODER E waterproofing and flexible sealing accessories will prevent any leakages. Flexible adhesives, e.g. of the ATLAS PLUS line, will protect the tiling against thermal stress damages. The properties of the ARTIS grout make it durable in colour and resistant to efflorescence and mould. Combined with a mosaic, the ATLAS Decorative Grout will give your bathroom an unique and modern look.

Build Your Own Floor-heated Bathroom – Step by Step

1. Sloping the floor in the shower

The substrate should be free from any layers or elements that might reduce adhesion, or any flaking fragments of old mortar. All superficial fissures in the substrate should be broadened and dusted. Right before laying the ATLAS POSTAR 20 screed, the substrate should be wet with water and coated with a contact layer of POSTAR 20 mixed with the ATLAS ELASTIC EMULSION. The layer of the screed of the shower should slope down towards the drain so that the water can escape easily. The slope should be 1.0 – 1.5%.

2. Embedding the heating rods



The heating installation should be tested, then fixed. We recommend pouring the screed in a single layer (with the heating installation stably fixed with e.g. ATLAS POSTAR 20). The screed should reach at least 35mm above the heating grid level. The floor heating effect can also be achieved using a heating mat. If opted for, it will be put in place at the final stage of the work, on top of waterproof-insulation.

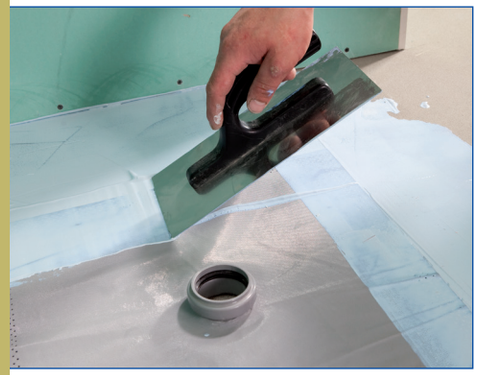
3. Waterproofing

Undertile waterproofing is applied to protect the screeds and plasters from decaying in contact with water. The thin-set is applied in two coats, spread with a brush or a steel trowel. The first coat should embed all sealing elements forming a waterproof film and ensuring tightness in critical points. For this purpose, we recommend the easily applied, single-component ATLAS WODER E (AVAL KL 51) liquid foil.

4. Embedding the sealing tape

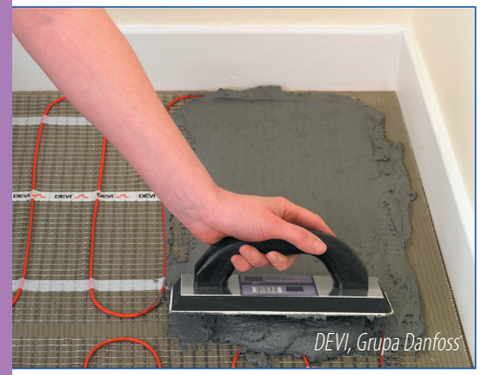
The joints between the wall and the floor, or between two walls, or the potential expansion joints, should be protected with flexible ATLAS SEALING TAPES. To do it properly, spread the waterproof compound along the edges and apply the tape so the tape perforated side strips are embedded in the mass. Follow the same approach to fix the ATLAS SEALING CORNERS, which complement the tape in room corners.

5. Fixing the sealing collar



Wherever water or sewage pipes cross the walls or the floor, additional protection is needed. To seal them off properly, you can use flexible ATLAS WALL RINGS and ATLAS FLOOR RINGS. Drawn over the pipe to form a collar, then the rings should be pressed into the fresh compound.

6. Laying the heating mat



Opting for the heating mat, you sink it in the fresh layer of deformable adhesive applied all over the bed when fixing the tiles. Any adhesive of the ATLAS PLUS line, or preferably the thick-layer PLUS MEGA, is advisable for this purpose. For natural stone tiles, we recommend the PLUS MEGA WHITE adhesive.

7. Priming

Wherever the walls or the floor had not been waterproofed, you need to prime the substrate before fixing the tiles. The choice of the primer depends on the properties of the substrate (absorptive or nonabsorptive, smooth or rough, etc.). ATLAS UNI-GRUNT (AVAL KT 17) will reduce absorption while ATLAS GRUNTO-PLAST (AVAL KT 16) will increase adhesiveness. Both are spread with a roller or a brush.

8a. Fixing the tiles

The tiles fixing consists in spreading the adhesive over the susbtrate with a steel trowel. Spread it first with the smooth-edged side, then profile with the notched side. The thicker the layer is needed, the deeper the trowel should be notched. When working with regular adhesive, it is advisable to spread it over the floor and the bottom side of the tile itself. This will help eliminate any voids underneath. When tiling a heated floor, you should opt for a deformable adhesives of S1 class, e.g. the highly flexible ATLAS PLUS (AVAL KM 17).

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8b. Fixing the tiles with self-spreading adhesives

When fixing floor tiles, it is advisable to choose thick-layer self-spreading adhesives. They will prove useful particularly when the heating mat is sunk in the adhesive, or if the tiles are large size, i.e. above 30 cm long. Spread the adhesive on the substrate, preferably with a round-notched trowel which facilitates the adhesive distribution beneath the tiles.
The deformable ATLAS PLUS MEGA with its broad range of applications (4-20 mm layer thickness) will be ideal for the purpose.

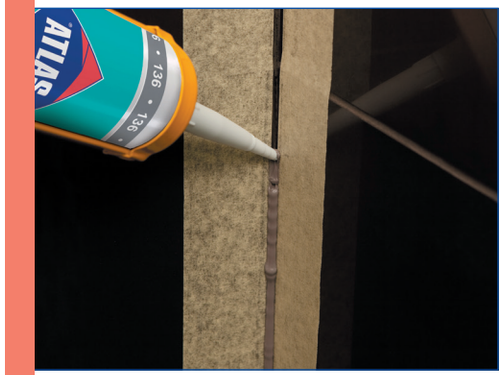
9a. Grouting with cement-based grout

Once the adhesive sets, you can commence the tiles grouting. Mix the cement-based grout with water and press it into the joints between the tiles with a rubber float. Remove any excess of the grout with a float led diagonally to the edges of tiles and held at ca. 45° to the tiles surface.
The tiles should be appropriately washed after grouting - we do it in two phases - the initial washing and the final one. We recommend the use of low absorptive ATLAS ARTIS GROUT or ATLAS DECORATIVE GROUS. Thanks to content of silver molecules these grouts provide antibacterial protection.

9b. Grouting with an epoxy grout

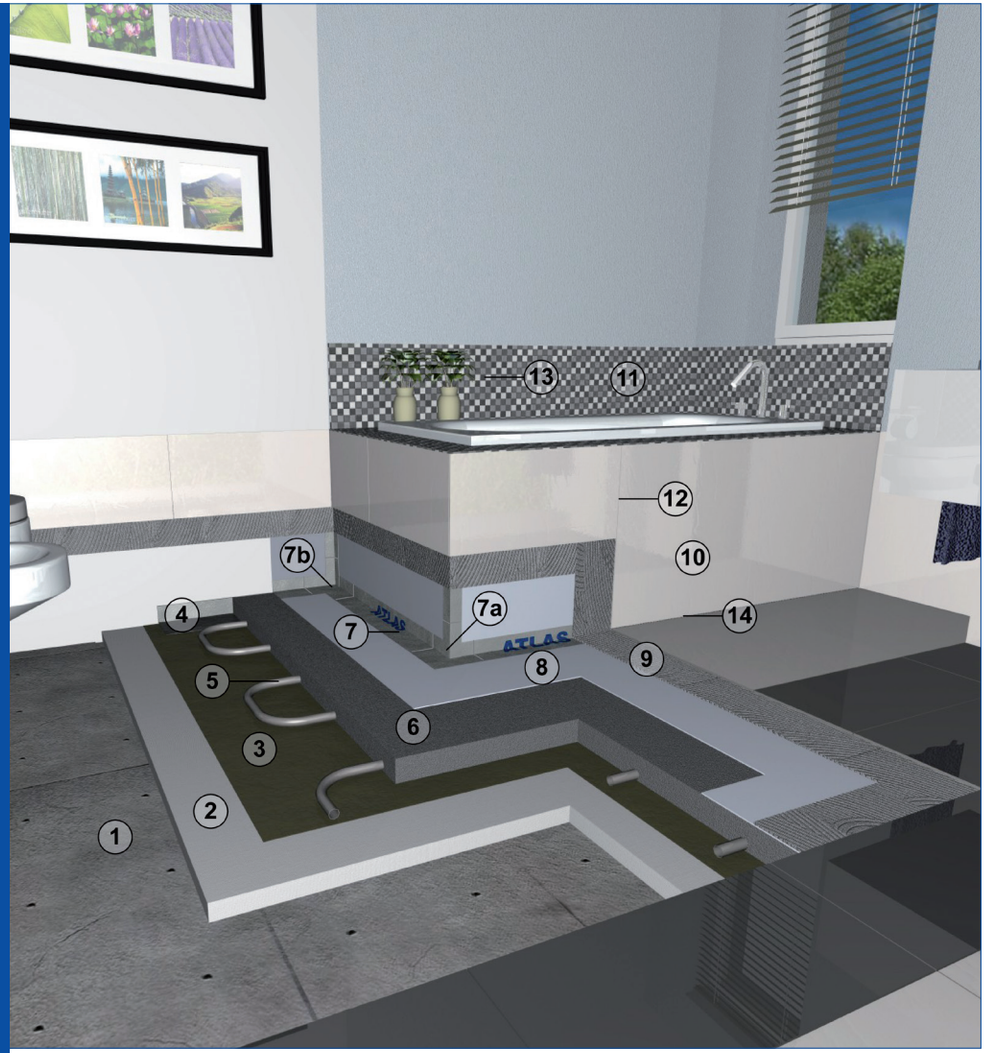
Epoxy grouts, e.g. ATLAS EPOXY GROUT, are supplied in sets of two components: the mass (A), and the hardener (B). They must be mixed thoroughly in accordance with the instruction on the packaging.
Press the mass into the joints meticulously and deep with a rubber float. Any excess left over the tiles must be removed immediately (no later than within 20 minutes) using a hard sponge soaked in cold water.

10. Filling the joints with silicone



Squeeze out the silicone even, in a continuous manner, leaving no voids, so the silicone fills the joints with a slight excess. You now have 10-15 minutes to profile and smooth the silicone with a putty knife dipped in water solution of e.g. soap. The joints should preferably be profiled so as to enable free draining of water. We recommend to use the fungi and mould resistant ATLAS ARTIS Sanitary Silicone.

Damp Zone – Cross Section of the Layers with the Heating Elements Embedded in the Substrate



1. Substrate 2. Thermal and acoustic insulation 3. PE foil 4. ATLAS EXPANSION JOINT PROFILE 5. Heating pipes 6. ATLAS POSTAR 20 screed
7. ATLAS SEALING TAPE 7a. ATLAS SEALING CORNER – OUTER 7b. ATLAS SEALING CORNER – INNER 8. ATLAS WODER E/AVAL KL 51 waterproofing
9. ATLAS PLUS/AVAL KM 17 deformable adhesive 10. Tiles 11. Mosaics 12. ATLAS ARTIS grout 13. ATLAS DECORATIVE grout 14. ATLAS ARTIS silicone

Damp Zone – Cross Section of the Layers with the Undertile Heating Mat

1. Substrate 2. Contact layer: ATLAS POSTAR 20 + ATLAS ELASTIC EMULSION + water 3. ATLAS POSTAR 20 screed 4. ATLAS SEALING TAPE
4a. ATLAS SEALING CORNER – OUTER 4b. ATLAS SEALING CORNER – INNER 5. ATLAS WODER E/AVAL KL 51 waterproofing 6. Heating mat
7. ATLAS PLUS/AVAL KM 17 deformable adhesive 8. Tiles 9. Mosaic 10. ATLAS ARTIS grout 11. ATLAS DECORATIVE grout 12. ATLAS ARTIS silicone

Wet Zone – Cross Section of the Layers – Corner Sealing

1. ATLAS SEALING TAPE 1a. ATLAS SEALING CORNER – INNER 2. ATLAS WODER E/AVAL KL 51 waterproofing 3. ATLAS PLUS/AVAL KM 17 deformable adhesive
4. Tiles 5. Mosaic 6. ATLAS ARTIS grout 7. ATLAS DECORATIVE grout 8. ATLAS ARTIS silicone

Wet Zone – Cross Section of the Layers – Pipe Passages Sealing

1. ATLAS SEALING TAPE 1a. ATLAS SEALING WALL RING 1b. ATLAS SEALING FLOOR RING 2. ATLAS WODER E/AVAL KL 51 waterproofing
3. ATLAS PLUS/AVAL KM 17 deformable adhesive 4. Tiles 5. Mosaic 6. ATLAS ARTIS grout 7. ATLAS DECORATIVE grout 8. ATLAS ARTIS silicone

STAGE	TRADE NAME	PRODUCT	PROPERTIES	CONSUMPTION	TECHNICAL PARAMETERS
1,2	POSTAR 20		• quick-setting • thick and formable • very low linear shrinkage • foot traffic allowed after: 24 hours • tiling possible after: 5 days • residual humidity <3% • fit for places exposed to permanent dampness	• average consumption: 20 kg of the mortar per 1 m² with the 10 mm of layer thickness	• water/mortar mixing proportions: ca 2.75l / 25 kg • contact layer proportions: 1 kg of dry mix + 0.12 l of water + 0.06 l of the ATLAS Elastic Emulsion • min./max. substrate layer thickness: 10 mm / 80 mm • linear changes: ≤0.06% • mass preparation temperature; substrate, and ambient temperatures whilst on the job: +5°C to +30°C • open time: min. 30 min. • foot traffic allowed after: ca 24 hours • tiling after: ca 5-6 days
1	ATLAS ELASTIC EMULSION		• improves mortar flexibility • increases adhesion to the substrate • improves working parameters • broadens the applications of the selected mortars • is a component of the contact layer for ATLAS POSTAR 20	• average consumption: 1 kg of the ATLAS ELASTIC EMULSION per 10 kg of modified cement mortar • in the contact layer: 1 kg of emulsion per 2 l of water per 16kg of POSTAR 20	• mass preparation temperature; substrate, and ambient temperatures whilst on the job: 5°C - 25°C
3	WODER E AVAL KL 51		• 1-component liquid foil • highly flexible • ideal for bathrooms and shower cabins • for balconies and terraces	• consumption: 1.5-3 kg/m²	• min/max. layer thickness: 1-5 mm • open time: min. 30 min. • tiling after: ca 24 hours • ambient temperature whilst on the job: 5-30°C
4,5	WODER ACCESSORIES		• sealing system elements • highly flexible • fit for bathrooms, kitchens, showers • fit for balconies and terraces		• resistance to UV radiation • resistance to temperature: -30°C – +90°C
7	UNI-GRUNT AVAL KT 17		• quick-drying priming emulsion • fit for absorptive substrates • reinforces the surface and ensures uniform absorptiveness of the primed substrate • fit to go under floorings, plasters, adhesives, gypsum finishings, paints • very short drying time (2 hours) • can be diluted 1:1	• 0.05 – 0.2 kg / 1 m² (depends on absorptiveness of the substrate)	• emulsion thickness: 1g/cm³ • drying time: 2 hours
8a	PLUS AVAL KM 17		• deformable adhesive • class C2TE S1 • high adhesiveness and deformability • fit for demanding substrates – OSB board and plasterboards, existing tiles • fit for terraces, balconies, and façades • fit for heated floors and walls • thickness of the adhesive layer: 2-10 mm	• 1.5 kg of dry mixture / 1 m² at the adhesive layer of 1 mm	• mixing proportions (water/dry mixture): 5.00 ÷ 5.75 l / 25 kg • min./max. adhesive layer thickness: 2 mm / 10 mm • adhesive preparation temperature; substrate, and ambient temperatures whilst on the job: +5°C to +25°C • curing time: ca 5 min. • pot life: ca 5 hours • open time: min. 30 min. • tile adjustment time: ca 10 min. • foot traffic allowed after: ca 24 hours • grouting after: ca 24 hours • full functional strength after: ca 3 days

STAGE	TRADE NAME	PRODUCT	PROPERTIES	CONSUMPTION	TECHNICAL PARAMETERS
8b	PLUS MEGA		• deformable adhesive • fit for large-size floor tiles • class C2E S1 • self-spreading, for thick layers: 4-20 mm • high adhesiveness and deformability • perfectly fills any voids under the tiles • fit for demanding substrates – OSB board old tiling, terrazzo • fit for terraces, balconies, floor heating	• 1.5 kg of dry mixture / 1 m² at the adhesive layer of 1 mm	• mixing proportions (water/dry mixture): 5.25 ÷ 6.00 l / 25 kg • min./max. adhesive layer thickness: 4mm/20mm • adhesive preparation temperature; substrate, and ambient temperatures whilst on the job: +5°C to +25°C • curing time: ca 5 min. • pot life: ca 4 hours • open time: min. 30 min. • tile adjustment time: ca 10 min. • foot traffic allowed after: ca 24 hours • grouting after: ca 24 hours • full functional strength after: ca. 3 days
9a	ARTIS GROUT		• highly flexible • fit for heated floors • quick-setting • contains silver nanoparticles – antibacterial • low absorbing • resistant to fungi and mould • durable and intense colours	• depends on the joint width, the tile thickness and size; ca. 0.35 kg/m² for the joint 4 mm wide and 7.5 mm deep, for tiles 300x300mm	• min./max. joint width: 1-25 mm • pot life: ca 30-40 min. • initial cleaning after: ca 30 min. • final cleaning after: ca 3 hours • light foot traffic allowed after: ca 3 hours • full functional strength after: ca 24 hours
9a	DECORATIVE GROUT		• decorative • glitter effect • highly flexible • fit for heated floors • fit for walls and floors • low absorbing • resistant to fungi and mould • antibacterial	• depends on the joint width, the tile thickness and size; ca. 0.35 kg/m² for the joint 4 mm wide and 7.5 mm deep, for tiles 300x300mm	• min./max. joint width: 1-15 mm • pot life: ca 30-40 min. • initial washing after: ca 30 min. • final washing after: ca 3 hours • light traffic allowed after: ca 3 hours • full functional strength after: ca 24 hours
9b	EPOXY GROUT		• waterproof • resistant to staining (grease, juice, sauces) • ideal for shower cabins and basins, kitchens, and pools	• depends on the joint width, the tile thickness and size	• min./max. joint width: 1-6mm for walls, and 1-10 mm for floors • pot life: ca 30 min. • cleaning: max. 10-20 min. • traffic allowed after: ca 24 hours • full mechanical strength after: ca 14 days • full chemical strength after: ca 14 days
10	ARTIS SILICONE		• resistant to fungi and mould – Myco Protect system • durable and intense colours for years – Color Protect technology, resistant to UV radiation • frost- and water resistant	• depending on the joint width, the tile thickness and size	• hardening system: acetate • open time: ca 15 min. • temperature resistance upon hardening: -50°C – +180°C

Bathroom System

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