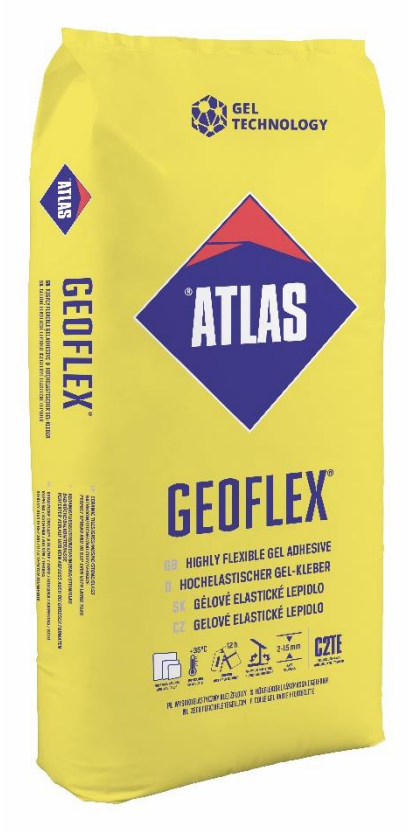

ATLAS GEOFLEX

highly flexible gel adhesive
2-15 mm

C2TE

PRODUCT CONFROMS TO THE EUROPEAN STANDARD

- for ceramic and stone cladding
- zero flow or full spill under tile
- entry onto the cladding and grouting after just 12 hours
- for filling, thin-coat and thick-coat bonding
- on difficult substrates, including concrete, terrazzo, old tiles and OSB for terraces and balconies

UNIQUE GEL TECHNOLOGY

The ATLAS GEOFLEX adhesive formulation uses the innovative technology of silicate gel. The silicate gel has the unique ability to bind water. The gel fills the pores formed at the stage of adhesive setting through the network of inorganic bonds. Accumulation of a part of the mixing water ensures complete cement hydration, regardless of the type of the tiles. Thanks to appropriate water management, which is necessary to complete the setting process, the gel adhesive ensures full adhesion to substrates of various absorbency levels.

The use of silicate gel technology offers the following benefits:

- the possibility of bonding any type of cladding, both absorbent and non-absorbent,
- it is possible to optimally adapt the consistency of the adhesive to the individual preferences of the contractor and the needs of the application specific application, by dosing water over a much wider range than with traditional adhesives,
- achieving a full spread of adhesive under the panels, which improves the adhesion and durability of the fixing, especially in external applications,
- safe bonding of coverings on substrates exposed to direct sunlight, both during tiling work and while the adhesive mortar is setting (e.g. on balconies, terraces, etc.).

Properties

ATLAS GEOFLEX is manufactured as a dry mixture of the highest quality cement binder, aggregates and specially selected modifying agents: natural and synthetic.

The wide range of adhesive layer thicknesses (2-15 mm) allows:
- thin-bedding of cladding on an even substrate,
- thin-bedding of coverings on uneven substrates, preceded by levelling,
- Thick-coat bonding of coverings on uneven substrates without the need for levelling compound.

Zero cladding run-off - provides the opportunity to adhere the cladding 'from the top down', without the need to support it at the installation stage.

It is possible to step on and grout the tile after only 12 hours - due to the accelerated setting and drying process of the mortar under the tile.

Purpose

CLADDING TYPE	
glazed tiles	+
terracotta	+
porcelain tiles	+
laminated tiles	use ATLAS ULTRA GEOFLEX
natural stone cladding (granite, marble, travertine, syenite, slate, etc.).	perform an application test*
clinker	+
stoneware	+
ceramic mosaic	+
glass mosaic	perform an application test*
glass, coloured, printed tiles, etc.	perform an application test* and check the recommendations of the tile manufacturer
concrete / cement mortar tiles	+
composite panels	use ATLAS ULTRA GEOFLEX
insulation and soundproofing panels	use ATLAS ULTRA GEOFLEX

*for a description of the application test, see paragraph Important additional information

FORMATS OF INSTALLED ELEMENTS	
small, medium and large format tiles: ≤ 0.50 m² and with the length of the larger side ≤ 100 cm	+
large tile format (> 0.50 m²)	use ATLAS ULTRA GEOFLEX
slim type tiles	use ATLAS ULTRA GEOFLEX

TYPES OF OBJECT	
residential buildings	+
public, educational, office and healthcare buildings	+
commercial and service construction	+
sacral buildings	+
industrial buildings and multi-storey garages	Use ATLAS ULTRA GEOFLEX
industrial warehouses	Use ATLAS ULTRA GEOFLEX
infrastructure buildings	Use ATLAS ULTRA GEOFLEX
SPA objects	Use ATLAS ULTRA GEOFLEX

PLACE OF INSTALLATION	
low-traffic areas	+
medium traffic areas	+
high traffic areas	use ATLAS ULTRA GEOFLEX
kitchen, bathroom, laundry room, garage (in individual housing)	+
terraces	+
balconies, loggias	+
external slab stairs	+
external post stairs, e.g. cantilever stairs	use ATLAS ULTRA GEOFLEX
traffic routes	+
facades (including on thermal insulation systems)	use ATLAS ULTRA GEOFLEX
cladding of building plinths	+
process tanks, swimming pools, fountains, jacuzzies, balneotechnology (without aggressive chemicals)	use ATLAS ULTRA GEOFLEX
drinking water tanks	use ATLAS PLUS
saunas	use ATLAS ULTRA GEOFLEX
showers, washing facilities, rooms washed with large quantities of water	+

substrate type - standard	
cement floors and screeds	+
anhydrite screeds	+
cement and cement-lime plasters	+
gypsum plasters	+
cellular concrete	+
brick or silicate block walls	+
brick or hollow brick walls	+
gypsum block masonry	+

substrate type - difficult	
concrete	+
terrazzo	+
mineral, dispersion and reactive sealing coatings	+
plasterboard drywall	+
screeds (cement or anhydrite) with water or electrical underfloor heating,	+
screeds with heating mat embedded in the adhesive	+
plaster with wall heating	+
gypsum boards	+
gypsum fibre boards	+
cement fibre boards	+
existing ceramic or stone cladding (tile on tile)	only inside
resin varnishes for concrete bound to the substrate	+
dispersive, oil painting coats, bonded with substrate	+
timber floors (thickness >25mm)	use ATLAS ULTRA GEOFLEX
wood-based flooring panels, minimum 22 mm thick, fixed with ATLAS M-System fasteners	+
OSB/3, OSB/4 and particle board on the floor (thickness > 25 mm)	+
OSB/3, OSB/4 and particle board on the wall (thickness > 18mm)	+
metal and steel surfaces	use ATLAS ULTRA GEOFLEX
plastic surfaces	use ATLAS ULTRA GEOFLEX

ATLAS GEOFLEX adhesive is also used for filling the above-mentioned standard and difficult substrates.

Technical data

Bulk density	approx. 1.4 g/cm³
Mixing ratio (water/dry mix)	0,255 ÷ 0,325 l / 1 kg 1,28 ÷ 1,63 l / 5 kg 5,74 ÷ 7,31 l / 22,5 kg 6,38 ÷ 8,12 l / 25 kg
Min/max. adhesive thickness	2 mm ÷ 15 mm
Temperature of the adhesive preparation and of the substrate and surroundings during the work	from +5 °C to +35 °C
Maturation time	5 minutes
Pot life (stand-by time)*	approx. 4 hours
Open time*	min. 30 minutes
Adjustability*	20 minutes
Walking on the floor/jointing*	after 12 hours
Full operational loads - pedestrian traffic*	after 3 days
Full operational loads - wheeled traffic*	after 14 days

*) The times shown in the table are recommended for application conditions of approx. 23 °C and 55 % humidity.

Technical requirements

The product meets the requirements of PN-EN 12004+A1:2012 - type C2TE - adhesive for tiles, cementitious tile adhesive with increased parameters, extended open time and reduced run-off, for indoor and outdoor use on walls and floors.

ATLAS GEOFLEX (2023) Declaration of performance 282/CPR. EN 12004:2007+A1:2012	
Intended use: Any interior and exterior installation of tiles	
Reaction to fire	$A1/A1_{fl}$
Bond strength defined as: initial bonding	≥ 1.0 N/mm²
Bond durability in conditioning/thermal ageing conditions defined as: bonding after thermal ageing	≥ 1.0 N/mm²
Bond durability in water/damp conditions defined as: bonding after immersion in water	≥ 1.0 N/mm²
Bond durability in freeze-thaw cycles conditions defined as: bonding after freeze-thaw cycles	≥ 1.0 N/mm²

Substrate preparation

The substrate should be:
stable - sufficiently load-bearing, resistant to deformation, free of substances that reduce adhesion and seasoned.
even - the maximum thickness of the adhesive is 10 mm, for levelling substrates with larger irregularities can be levelled using, for example :
- ATLAS ZW 330 mortar
- ATLAS MMS, SMS, SAM or POSTAR floor screeds

cleaned - from layers that may impair adhesion of the adhesive, in particular from dust, dirt, lime, oil, grease, wax, oil and emulsion paint residues. Substrate covered with algae, mould fungi etc., should be cleaned and protected with :
- ATLAS MYKOS PLUS,

primed when the substrate has excessive or heterogenous absorbency :
- ATLAS GRUNT NKP (ready to use – no dilution)
- ATLAS UNI-GRUNT
- ATLAS UNI-GRUNT ULTRA

Covered with a bonding primer when the substrate has low absorbency or is covered with layers that limit adhesion:
- ATLAS ULTRAGRUNT – recommended for critical substrates
- ATLAS GRUNTO-PLAST

Insulated – when laying tiles on substrates exposed to water
- ATLAS FAST DRYING LIQUID FOIL WODER E
- ATLAS LIQUID FOIL WODER W
- ATLAS WODER SX
- ATLAS WODER DUO,

Detailed indications for the preparation of the substrate, depending on the type of substrate, are shown in the table at the end of the Technical Data Sheet.

Cladding installation

Preparation of the adhesive

Pour the contents of the bag into a vessel with a measured amount of water (proportions given in the Technical Data) and mix with a slow-speed mixer with a mortar mixer until a uniform consistency is obtained. Set the mixed adhesive aside for 5 minutes and mix again. The adhesive thus prepared should be used within approximately 4 hours.

Application of adhesive

It is recommended to first rub a thin layer of adhesive into the substrate and then apply a thicker layer of adhesive, immediately profiling it with a notched trowel. It is recommended that the toothed trowel is guided in one direction as much as possible. On walls, it is recommended to profile the adhesive in a vertical direction.
In the case of tiles laid on floors and cladding carried out outdoors, it is recommended that the bonding surface is complete (if necessary, use a combined method of applying adhesive mortar to the substrate and to the undersurface of the tile).

Bonding the cladding

After spreading on the substrate, the adhesive retains its properties for approximately 30 minutes (at a temperature of approximately 23°C and 55 % humidity). During this time, apply the tile to it and press down carefully (the contact area between the tile and the adhesive should be even and as large as possible - min. 2/3 of the tile surface). Excess adhesive appearing in the joints when pressing the tiles should be removed continuously.
Maintain joint widths according to tile size and conditions

Correcting the position of the plate

The position of the tile can be corrected by gently moving it in the plane of bonding. This can be done up to approximately 20 minutes after pressing (at a temperature of approx. 23 °C and 55 % humidity).

Grouting and use of the cladding

The use of ATLAS mortars, e.g. ATLAS CERAMIC GROUT, is recommended for grouting the cladding. It is possible to step on the cladding and start grouting approximately 12 hours after the tiles have been adhered. The mortar reaches its service strength after 3 days (information given in the Technical Data). Expansion joints between tiles, joints along wall corners, joints at sanitary facilities should be filled with ATLAS ELASTIC SANITARY SILIKONE or ATLAS SANITARY SILIKONE SILTON S.

Consumption

The average adhesive consumption figures given in the table refer to application on an even substrate. Unevenness of the substrate increases the unit consumption of the adhesive mortar.

Tile size [cm]	Place of application	Recommended trowel tooth size [mm]	Consumption rate [kg/m^2]
2 x 2	wall	4	1,3
	flooring	4	1,3
10 x 10	wall	4	1,3
	flooring	6	2,0
15 x 60	wall	6	2,0
	flooring	8	2,5
20 x 25	wall	6	2,0
	flooring	8	2,5
25 x 40	wall	6	2,0
	flooring	8	2,5
30 x 30	wall	6	2,0
	flooring	8	2,5
30 x 60	wall	8	2,5
	flooring	10	3,0
40 x 40	wall	8	2,5
	flooring	10	3,0
50 x 50	wall	8	2,5
	flooring	10	3,0
60 x 60	wall	10	3,0
	flooring	12	3,5
70 x 70	wall	10	3,0
	flooring	12	3,5
tiles of the type board*, e.g. 20 x 90 or 15 x 100	wall	8	2,5
	flooring	10	3,0

*for plank-type tiles, a combined laying method is recommended

When using the mix combined method, the adhesive consumption will increase. When bonding floor coverings, using a 12 mm trowel with semi-circular teeth (flowing consistency 8.25 l water/25 kg mortar) - consumption 4.6 kg/m².

Packaging

Plastic bags: 25 kg, 22.5 kg
Alubag: 5 kg

Safety information

Safety information is provided on the product packaging and in the Safety Data Sheet available at www.atlas.com.pl.

Storage and transport

Information on storage and transport is provided on the product packaging and in the Safety Data Sheet available at www.atlas.com.pl.

The shelf life of the product is:
- for product in plastic bags - 12 months from the production date shown on the packaging,
- for product in alubag - 24 months from the production date shown on the packaging.

Important additional information

Spreading under the tile is achieved using a quantity of baking water from the upper end of the mixing ratio range, i.e. approximately 0.33 l per 1 kg of dry mix. Zero run-off is achieved using a quantity of baking water from the lower end of the mixing ratio interval, i.e. approximately 0.26 l per 1 kg of dry mix.

When cladding a balcony or terrace, the subfloor should be divided by expansion joints into areas of max. 3 x 3 m.
It is possible to increase the size of the subfloor dilatation areas to 25 m^2 provided that forced dilatation is carried out in the cladding itself (min. 4 cladding fields recommended, each with an area of up to 9 m^2). When making the expansion fields, observe the requirement that the ratio of the shorter side to the longer side should be between 1:1 and 1:2. The expansion joints of the substrate should be transferred to the cladding and filled with ATLAS ELASTIC SANITARY SILIKONE or ATLAS SANITARY SILIKONE SILTON S. The minimum thickness of the adhesive after pressing the tiles should be 4 mm. The adhesive must fill the entire space between the tile and the substrate.

All indicated technological break times, technical parameters of the product, etc. refer to standard setting conditions, i.e. at the temperature: +23°C (+/-2°), relative humidity: 55% (+/- 5%) and substrates as defined in EN 1323 and tiles according to EN 176. In other heat and humidity conditions the indicated times may change.

Do not soak the tiles before adhering. When determining the thickness of the adhesive under the cladding to be adhered, geometric deviations in the shape of the tiles, e.g. curling of the plane, must be taken into account.

Before fixing natural stone tiles or glass elements, it is necessary to carry out an application test. For this purpose, one tile should be adhered to the substrate. The bonding area should be 60 % (40 % of the tile surface should not be in contact with the adhesive). After 2-3 days, the appearance of the tile should be assessed. The test result can be considered positive if there are no shade differences on the tile surface between areas in contact and not in contact with the adhesive.

The open time - from the application of the adhesive to the substrate to the application of the tiles - is limited. To check whether it is still possible to stick the tiles, a simple test is recommended. This consists of pressing the fingers of your hand against the applied adhesive. If the adhesive remains on the fingers, then the tiles can be adhered. When the adhesive does not stick to the fingers, remove it from the substrate and apply a new layer.

Clean the tools with clean water, directly after using the adhesive. Difficult to remove remains of the bonded adhesive should be washed off with ATLAS SZOP 2000.

The information included in the Technical Data Sheet constitutes basic guidelines concerning the use of the product and does not release from the obligation to conduct work according to the best construction practices and health and safety at work regulations. On the date of issue of this Technical Data Sheet, all previous Technical Data Sheets become invalid. The accompanying documents for the product are available at www.atlas.com.pl.

Update date: 2022-11-03

The table below shows the specific requirements for substrate preparation. Before starting work, also refer to the Technical Sheets of the products listed in the table. The times shown in the table are recommended for application and seasoning conditions of approx. 20 °C and 50 % humidity.

Newly manufactured cementitious screeds **ATLAS POSTAR 10**	**Moisture content of the substrate 4.0 % CM** - after approx. 1.5 days for a primer thickness of 1.0-3.0 cm - after approx. 3 days for a substrate thickness of 3.1-5.0 cm - after approx. 9 days for a substrate thickness of 5.1-10.0 cm
Newly manufactured cementitious screeds **ATLAS POSTAR 20**	**Moisture content of the substrate 4.0 % CM** - after approx. 1 day for an undercoat thickness of 1.0-3.0 cm - after approx. 2 days for a substrate thickness of 3.1-5.0 cm - after approx. 5 days for a substrate thickness of 5.1-8.0 cm
Newly manufactured cementitious screeds **ATLAS POSTAR 60**	**Moisture content of the substrate 4.0 % CM** - after approx. 6 hours for a substrate thickness of 1.0-3.0 cm - after approx. 12 hours for a substrate thickness of 3.1-5.0 cm - after approx. 40 hours for a substrate thickness of 5.1-8.0 cm
Newly manufactured cementitious screeds **ATLAS POSTAR 80**	**Moisture content of the substrate 4.0 % CM** - after approx. 3 hours for a substrate thickness of 1.0-3.0 cm - after approx. 6 hours for a substrate thickness of 3.1-5.0 cm - after approx. 18 hours for a substrate thickness of 5.1-8.0 cm
Newly manufactured cementitious screeds **ATLAS SMS 15**	Moisture content of the primer 4.0 % **CM** - after approx. 8 hours for an undercoat thickness of 1-15 mm
Newly manufactured cementitious screeds **ATLAS SMS 30**	Moisture content of the primer 4.0 % **CM** - after approx. 18 hours for an undercoat thickness of 3-5 mm - after approx. 48 hours for an undercoat thickness of 6-10 mm - after approx. 72 hours for a substrate thickness of 11-20 mm - after approx. 96 hours for an undercoat thickness of 21-30 mm
Other cement mortar screeds	Compressive strength of at least 12 MPa. Seasoning minimum 28 days Optimum moisture content < 4% by weight Prime with one of the emulsions: - ATLAS GRUNT NKP (ready to use – no dilution) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOR - ATLAS UNI-GRUNT ULTRA
Newly manufactured hybrid screeds **ATLAS MMS 60**	Required moisture content of the substrate 0.5 % CM - after approx. 21 days for a substrate thickness of 2.0 - 4.0 cm - after approx. 28 days for a substrate thickness of over 4.0 cm
Newly manufactured anhydrite screeds **ATLAS SAM 100**	Moisture content of the screed 1.0 % **CM** - approx. 4 days for a thickness of 0.5-3.0 cm Prime with one of the emulsions: - ATLAS GRUNT NKP (ready to use – no dilution) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOR - ATLAS UNI-GRUT ULTRA
Newly manufactured anhydrite screed **ATLAS SAM 200**	Moisture content of the screed 1.0 % **CM** - approx. 10 days for a thickness of 2.5-4.0 cm - approx. 21 days for a thickness of 4.1 to 6.0 cm If a white surface deposit has appeared while the primer is drying, it should be removed mechanically by sanding and then the entire surface dusted. Prime with one of the emulsions: - ATLAS GRUNT NKP (ready to use – no dilution) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOR - ATLAS UNI-GRUT ULTRA
Cement and anhydrite screeds with underfloor heating (heating underlays)	Attention. When the substrate is a screed with sunken underfloor heating, it must absolutely be heated. Information on the heating of ATLAS screeds is given in their technical data sheets. Tiles with ATLAS GEOFLEX can be adhered both on and off underfloor heating: - when the tiles are applied on a screed with the underfloor heating switched off, then the underfloor heating may be activated after a minimum of 14 days, - when the tiles are installed on a screed with the underfloor heating system switched on, the temperature of the screed must be stabilised and may not exceed +35 °C. For the next 14 days after the installation of the tiles, the temperature of the screed must not exceed +35 °C. It is not possible to adhere tiles to other types of operating (switched on) underfloor heating, embedded e.g. in an adhesive layer.

Bricks or hollow bricks of calcium-silicate, ceramic or cellular concrete	**A two-layer render (render + filler) trowelled to a rough finish is required.** Bonding directly to unrendered masonry is only possible if the geometric requirements of the substrate are met. In this case, it is necessary to complete the wall with a full joint (or to complete the jointing) and to repair any defects and unevenness using ready-made mortars. **Prime with one of the emulsions:** - ATLAS GRUNT NKP (ready to use – no dilution) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOR - ATLAS UNI-GRUT ULTRA
Cement and cement-lime plasters from ATLAS ready-mixed mortars	**Seasoning minimum 3 days for every 1 cm of thickness.** **Optimum moisture content < 4% CM** **Prime with one of the emulsions:** - ATLAS GRUNT NKP (ready to use – no dilution) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOR - ATLAS UNI-GRUT ULTRA
Other cement and cement-lime plasters	**Minimum CS category III** **Minimum curing time of 7 days for each 1 cm of thickness** **Prime with one of the emulsions:** - ATLAS GRUNT NKP (ready to use – no dilution) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOR - ATLAS UNI-GRUT ULTRA
Gypsum plasters	**Recommended compressive strength > 4 MPa** **Prime with one of the emulsions:** - ATLAS GRUNT NKP (ready to use – no dilution) - ATLAS UNI-GRUNT - ATLAS UNI-GRUNT COLOR - ATLAS UNI-GRUT ULTRA If the gypsum plaster is made in a wet room, then it should be carefully protected against moisture, e.g. by applying an insulating coating of ATLAS FAST DRYING LIQUID FOIL WODER E or ATLAS LIQUID FOIL WODER W. Gypsum plaster should be removed.
Mortar levelled substrates **ATLAS ZW 330**	**Moisture content of the screed 1.0 % CM** - 5 hours at 5 mm film thickness - 10 hours at a film thickness of 10 mm - 20 hours for a layer thickness of 20 mm - 48 hours for layer thicknesses over 20 mm
Concrete floors	**Minimum class C16/20** **Seasoning time minimum 3 months** **Optimum moisture content < 4% by weight** **Absolutely clean off** any residue from concreting separators and other substances that may impair adhesion **Repair deficiencies, chipping and other cavities with one of the mortars:** - ATLAS ZW 330 - ATLAS FILER S Prime with ATLAS ULTRAGRUNT
Newly installed waterproofing with ATLAS WODER system	- ATLAS FAST DRYING LIQUID FOIL WODER E - possibility to install cladding after 2 hours for damp insulation and after 4 hours for water insulation - ATLAS LIQUID FOIL WODER W - possibility to install the cladding after 24 hours - ATLAS WODER DUO - possibility to install the cladding after 12 hours - ATLAS WODER SX – possibility to install the cladding after 40 hours
Terrazzo	Thoroughly degrease the surface and, in the case of pasted terrazzo, remove the top part or all of it and make a new primer. Prime with ATLAS ULTRAGRUNT.
Oil paint and resin varnish coatings	Remove coats with low adhesion to the substrate mechanically. Stable coatings well bonded to the substrate: sand, vacuum; oil-based coatings should be primed with ATLAS ULTRAGRUNT. Remove gypsum putty based on which the substrate has been levelled.
OSB and plank flooring	- the layering should be designed and executed so as to prevent deformation that could damage the cladding - OSB/3 and OSB/4 (in accordance with EN 300:2007) with a thickness of at least 25 mm can be used for floors (22 mm in case implement ATLAS M-system) and boards at least 18 mm for walls. - the system must not buckle under operating loads. - for proper adhesion to the tile adhesive, roughen the surface of the substrate with abrasive paper grit 40-60 and clean off any dust. - prime with ATLAS ULTRAGRUNT - In rooms with higher humidity, possible swelling of the OSB boards (check the values declared by their manufacturer) or deformation of the boards must be taken into account. In this case, the system constituting the substrate for the tiles should be protected against moisture. ATLAS LIQUID FOIL WODER W or ATLAS FAST DRYING LIQUID FOIL WODER E waterproofing can be used for this purpose.
Existing ceramic or stone tiling (interior only)	- assess the adhesion of the existing cladding to the substrate by tapping - remove any old tiles that have become detached from the substrate. - fill cavities, e.g. with ATLAS ZW 330 mortar - clean and degrease the surfaces of the existing tiles, matt glazed tiles with a diamond grinder. - clean all dust and prime with ATLAS ULTRAGRUNT.