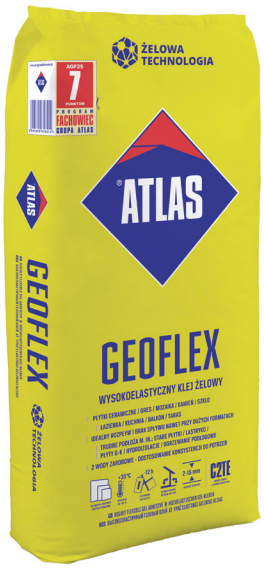

ATLAS GEOFLEX

highly flexible gel adhesive (2-15 mm)

- for ceramic or stoneware cladding
- no slip or full spread underneath a tile
- foot traffic and grouting just after 12 hours
- for floating, thin- and thick-coat application
- for difficult substrates, inc. concrete, terrazzo, old tiles and OSB
- for application on terraces and balconies

C2TE
PRODUCT CONFORMS TO THE EUROPEAN STANDARD

FOR WALLS AND FLOORS
FROST- AND WATERPROOF
INDOORS AND OUTDOORS
2-15 mm
LAYER THICKNESS

Unique Gel Technology

ATLAS GEOFLEX recipe contains an unique siliceous gel technology. The siliceous gel offers exceptional ability of water retention. It fills the pores formed at the stage of adhesive setting by the net of inorganic bindings. The accumulation of mixing water ensures full cement hydration, regardless the cladding type in use. Owing to the appropriate water management, which is necessary for the binding process completion, gel adhesive assures full adhesion to substrates of various absorptiveness level.

The use of siliceous gel technology gives the advantages:

- possibility of fixing cladding of any type, both absorbable and non-absorbable,
- possibility of optimum adaptation of the adhesive consistency to individual contractor's preferences and actual needs resulting from particular use, by dosing water within a range much wider than in case of traditional adhesives,
- full adhesive spreading beneath the tiles, which improves adhesion and bond durability, particularly in case of outdoor use,
- safe cladding fixing on substrates exposed to direct sunshine, both during tiling and the adhesive setting (e.g. on balconies, terraces, etc.).

Properties

ATLAS GEOFLEX is manufactured in the form of dry mix of highest quality cement binder, aggregates and special composition of natural and synthetic modifying agents.

Wide range of adhesive thickness (2-15 mm) enables:

- thin-coat cladding fixing on even substrates,
- thin-coat cladding fixing on uneven substrates, preceded by substrate floating,
- thick-coat cladding fixing on uneven substrates, with no need of substrate floating.

No cladding slip – enables fixing the cladding "from the top" with no need of support at the fixing stage.

Foot traffic and grouting just after 12 hours – owing to accelerated adhesive setting and drying process.

Use

CLADDING TYPE	
glazed tiles	+
terracotta	+
porcelain gres	+
laminated gres	use ATLAS ULTRA GEOFLEX
natural stone (granite, marble, travertine, syenite, slate)	perform application test*
clinker	+
stoneware	+
ceramic mosaic	+
glass mosaic	perform application test*
glass, coloured, printed tiles	perform application test* and check recommendations of tiles manufacturer
concreto/cement mortar tiles	+
composite tiles	use ATLAS ULTRA GEOFLEX
insulation and sound absorbing panels	use ATLAS ULTRA GEOFLEX

*application test description shown on section Important additional information

SIZE OF INSTALLED ELEMENTS	
small, medium and large format tiles (≤ 0.25 m^2) and greater edge length ≤ 100 cm	+
extra-large tiles size (> 0.25 m^2)	use ATLAS ULTRA GEOFLEX
slim type tiles	use ATLAS ULTRA GEOFLEX

OBJECT TYPE	
residential buildings	+
public access, educational, office and healthcare facilities	+
commercial and service buildings	+
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

INSTALLATION AREA	
surfaces with low traffic	+
surfaces with moderate traffic	+
surfaces with large traffic	use ATLAS ULTRA GEOFLEX
kitchen, bathroom, laundry, garage (in residential buildings)	+
terraces	+
balcony, loggia	+
external slab stairs	+
external post stairs (e.g. cantilever stairs)	use ATLAS ULTRA GEOFLEX
communication routes	+
facades (including external thermal insulation systems)	use ATLAS ULTRA GEOFLEX
cladding on a plinths	+
technological reservoirs, swimming pools, fountains, jacuzzi, balneotechnology (without aggresive chemical agents)	use ATLAS ULTRA GEOFLEX
drinking water reservoirs	use ATLAS PLUS
sauna	use ATLAS ULTRA GEOFLEX
showers, car washes, rooms washed with plenty of water	+

SUBSTRATE TYPE - STANDARD	
cement floors and screeds	+
anhydrite screeds	+
cement, cement-lime plasters	+
gypsum plasters	+
walls made of cellular concreto	+
walls made of brick or ceramic hollow blocks	+
walls made of gypsum blocks	+

SUBSTRATE TYPE - DIFFICULT	
concrete	+
terrazzo	+
mineral, dispersive and reactive sealing coats	+
dry facing made of plasterboards	+
screeds (cement or anhydrite) with embedded floor heating, water or electrical	+
screeds with heating mat embedded in the adhesive	+
plasters with wall heating	+
plasterboards	+
gypsum fibre boards	+
cement fibre boards	+
existing ceramic or stone cladding (tile on tile)	indoors only
resin varnishes on concrete, bonded with substrate	+
dispersive, oil painting coats, bonded with substrate	+
timber floors (thickness > 25 mm)	use ATLAS ULTRA GEOFLEX
OSB/3, OSB/4 and plywood boards on the floor (thickness > 25 mm)	+
OSB/3, OSB/4 and plywood boards on the wall (thickness > 18 mm)	+
surfaces made of metal and steel	use ATLAS ULTRA GEOFLEX
surfaces made of plastics	use ATLAS ULTRA GEOFLEX

ATLAS GEOFLEX adhesive is applicable also for floating of standard and difficult substrates mentioned above

Technical data

Mass bulk density (after mixing)	ca. 1.4 g/cm^3
Mixing ratio (water/dry mix)	0.26 – 0.33 l / 1 kg 6.5 - 8.25 l / 25 kg
Min./max. adhesive thickness	2 mm / 15 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +35°C
Maturing time	5 minutes
Pot life*	approx. 4 hours
Open time*	min. 30 minutes
Adjustability time*	20 minutes
Floor access/ grouting*	after 12 hours
Full operation load – foot traffic*	after 3 days
Full operation load – vehicle traffic*	after 14 days
Floor heating (warm surface)*	after 14 days

The time shown in the table is recommended for the application in the temperature 23°C and humidity 55% (approx.).

Technical requirements

The product conforms to PN-EN 12004 + A1:2012 standard for C2TE class adhesive - cement-based adhesive of enhanced parameters, extended open time and reduced slip for indoor and outdoor use, for walls and floors.
EC Declaration of Performance No. 186/1/CPR.

CE 2007, 0767	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Intended use:	for indoor and outdoor use, for walls and floors
Reaction to fire	A1/A1$_{fl}$
Bonding strength defined as: - initial adhesion	**≥ 1.0 N/mm²**
Bonding strength in conditions of conditioning/thermal ageing defined as: - bonding afrer thermal ageing	**≥ 1.0 N/mm²**
Bonding strength in conditions of action of water/humidity defined as: - bonding afrer immersion in water	**≥ 1.0 N/mm²**
Bonding strength in conditions of freeze/thaw cycles defined as: - bonding afrer freeze/thaw cycles	**≥ 1.0 N/mm²**
Content/release of hazardous substances	NPD

The product has been given the Radiation Hygiene Certificate.

Substrate preparation

The substrate should be:
- **stable** – sufficiently sound, resistant to deformation, free from materials which would impair adhesion, stabilized.
- **even** – maximum adhesive thickness is 15 mm, in case of larger irregularities use, e.g. ATLAS ZW 330 mortar, screeds ATLAS SMS, SAM, POSTAR.

clean – free from layers which can impair adhesion, especially dust, dirt, lime, oils, greases, wax, residues of oil and emulsion paints. The substrate coated with algae, fungi, etc. must be cleaned and protected with ATLAS MYKOS no 1 or ATLAS MYKOS PLUS agent.

- **primed with:**

- ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS – substrates of excessive or heterogenous absorptiveness,
- ATLAS GRUNTO-PLAST – if the substrate absorptivity is low, or it is coated with layers limiting the adhesion.
- ATLAS ULTRAGRUNT - if the tiles are installed on a critical substrates.

- **damp proofed** - in case of installation of the tiles in areas exposed to the water or dampness:

- ATLAS WODER E - possible cladding installation after 2 hours for lightweight type damp proofing and 4 hours for heavy type damp proofing,

- ATLAS WODER W, ATLAS WODER S - possible cladding installation after 24 hours,
- ATLAS WODER DUO - possible cladding installation after 12 hours,
- ATLAS WODER DUO EXPRESS - possible cladding installation after 3 hours.

Cladding installation

Adhesive preparation

Pour the adhesive from the bag into a container with the suitable amount of water (see Technical Data for ratio) and mix, using a low speed mixer with a drill for mortars, until homogenous. The dispersed adhesive should be left to rest for 5 minutes and then remixed. So prepared adhesive should be used up within approx. 4 hours.

Adhesive application

The adhesive should be applied onto the surface with a steel trowel and then distributed evenly and shaped (possibly in one direction) using a notched trowel. It is advisable to rub a thin adhesive coat first and then apply the thicker coat and shape it with a notched trowel. It is recommended to lead a notched trowel in one direction. On walls, it's recommended to shape the adhesive in vertical direction.

Placing the tiles

After the application, the adhesive retains its properties for ca. 30 minutes (in temperature approx. 23 °C and 55 % humidity). Within this time, the tile must be placed and pressed well (the contact surface between the adhesive and the tile should be uniform and as large as possible – min. 2/3 of tile surface). Remove the excess of the adhesive pressed into the joints immediately.

In case of floor tiles or tiling outdoors it is advisable to keep the full bonding surface (use the mixed method consisting in application of the adhesive on the substrate and tile bottom side, if needed). Keep the joint width appropriate for the tile size and operation conditions (check data in the sheets of ATLAS grouts).

Tile adjustment

The position of a tile can be adjusted with delicate moves along the bonding plane. It can be done within approximately 20 minutes since the tile is pressed (in temperature approx. 23 °C and 55 % humidity).

Grouting and cladding use

Foot traffic and grouting with ATLAS GROUT, ATLAS ARTIS GROUT, ATLAS DECORATIVE GROUT or ATLAS EPOXY GROUT can start after approx. 12 hours since the tiles fixing. The mortar reaches the operational strength after 3 days (check the Technical Data). Expansion joints, joints along the wall corners, at sanitary equipment, etc. should be filled with sanitary silicone ATLAS SILTON S or ATLAS ARTIS.

Substrate type	Recommendations
Freshly applied cement screeds ATLAS POSTAR 80, ATLAS SMS 15 or SMS 30	Stabilized min. 24 hours; optimum moisture content < 4% by weight.
Freshly applied cement screed ATLAS POSTAR 20	Stabilized min. 2 days; optimum moisture content < 4% by weight.
Other cement screeds	Stabilized min. 28 days; optimum moisture content < 4% by weight. Prime with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS.
Anhydrite screeds ATLAS SAM 100, SAM 150, SAM 200 or SAM 500	Stabilized min. 2-3 weeks; optimum moisture content < 0.5% by weight. Prime with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS. If, white surface tarnish forms during screed drying, it should be removed mechanically (grinded) and the surface dedusted. Screed grinding accelerates the process of drying.
Cement and anhydrite screeds on floor heating	Appropriately heated and primed with ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS
Terrazzo	De-grease the surface thoroughly, in case of waxed terrazzo remove the top layer or whole layer and execute a new one. Prime with ATLAS ULTRAGRUNT.
Walls made of silicate or ceramic bricks and hollow blocks, cellular concrete	Levelling coat required (plaster). Direct fixing onto rough wall is possible in case of appropriate substrate dimensional tolerance. In such case it is necessary to execute full joint wall (or re-fill the joints) and repair any gaps or irregularities with ready-to-use mortars. Prime with ATLAS UNI-GRUNT.
Cement and cement-lime plasters of ready-to-use ATLAS mortars	Stabilized min. 3 days* for each 10 mm of thickness; optimum moisture content < 4% by weight.
Other cement and cement-lime plasters	Stabilized min. 7 days*. Prime with ATLAS UNI-GRUNT.
Gypsum plasters	Prime with ATLAS UNI-GRUNT. If gypsum plaster is applied in a wet room it should be thoroughly protected against moisture. If dampness has form of short term action or moderate water splash, then the plaster should be coated with a preparation improving resistance against damp penetration, e.g. ATLAS GRUNTO-PLAST.
Substrates levelled with ATLAS ZW 330 mortar	Stabilized min. 5 h for layer thickness 5 mm. Stabilized min. 10 h for layer thickness 10 mm. Stabilized min. 20 h for layer thickness 20 mm. Stabilized min. 48 h for layer thickness above 20 mm.
Concrete	Stabilized min. 21 days; optimum moisture content < 4% by weight. Remove residues of formwork oils and other substances which would impair adhesion. Prime with ATLAS ULTRAGRUNT. Holes, cracks and other gaps should be filled with ATLAS TEN-10 or ATLAS ZW 330 mortars.
Oil paints and resin lacquers coatings	Coatings of poor bonding to the substrate should be mechanically removed. Stable, well bonded coatings: grind, dust; prime oil coatings with ATLAS ULTRAGRUNT. Remove any gypsum fillers used for substrate evening.
OSB boards and wooden floors – the layer composition should be designed and executed in the way excluding the possibility of deformation which may lead to the cladding damage	-check the boards type, on floors one may use boards OSB/3 and OSB/4 (acc. to PN-EN 300:2007), min. 25 mm thick, on walls – min. 18 mm thick, - check the superstructure stability, boards must not move under operation load; fix additional, stiffening boards layer, if needed, - matt the surface with 40-60 sand paper, - dedust the surface.
Existing ceramic or stone tiles	- check bonding to the substrate of the existing cladding by tapping; individual loosening tiles must be removed, - clean and de-grease the existing tiles surface, - matt glazed tiles with a diamond grinder, - dedust the surface - prime with ATLAS ULTRAGRUNT

Detailed recommendations regarding the preparation of the substrate, depending on its type.

Examplary technological cycle of cladding installation

Step (following layer)	Product	Conditioning of the layer before execution of the next step*
Substrate levelling	levelling mortar ATLAS ZW 330	approx. 5 h
	screed ATLAS POSTAR 80 screed ATLAS SMS 15 screed ATLAS SMS 30	approx. 1 day
	screed ATLAS POSTAR 20	approx. 2 days
	screed ATLAS POSTAR 10 screed ATLAS SAM 100	approx. 14 days
	screed ATLAS POSTAR 100 screed ATLAS POSTAR 40 screed ATLAS SAM 150 screed ATLAS SAM 200 screed ATLAS SAM 500	approx. 21 days
Damp-proofing**	ATLAS WODER E ATLAS WODER S ATLAS WODER W ATLAS WODER DUO ATLAS WODER DUO EXPRESS	approx. 2 h approx. 24 h approx. 24 h approx. 12 h approx. 3 h
Installation of tiles	ATLAS GEOFLEX	approx. 12 h – wall
Grouting of tiles	grouting mortar ATLAS	-

*detailed conditions regarding conditioning are shown in Technical Data Sheets of relevant products.
** in systems without damp proofing, skip steps marked grey

Consumption

Average consumption of adhesive shown in table below is applicable for application on even substrate. Substrate irregularities are increasing the consumption of the adhesive mortar. In case of application of tiles with so called combined method, the consumption is increased.

Tiles size [cm]	Place of application	Recommended notches size [mm]	Consumption [kg/m^3]
2 x 2	wall	4	1.3
	floor	4	1.3
10 x 10	wall	4	1.3
	floor	6	2.0
15 x 60	wall	6	2.0
	floor	8	2.5
20 x 25	wall	6	2.0
	floor	8	2.5
25 x 40	wall	6	2.0
	floor	8	2.5
30 x 30	wall	6	2.0
	floor	8	2.5
30 x 60	wall	8	2.5
	floor	10	3.0
40 x 40	wall	8	2.5
	floor	10	3.0
50 x 50	wall	8	2.5
	floor	10	3.0
tiles – slab type* e.g. 20 x 90 or 15 x 100	wall	8	2.5
	floor	10	3.0

*for tiles of slab type, it is recommended to use the combined method of tiles fixing.
In case of application of tiles with so called combined method, the consumption is increased. In case of installation of a tiles on the loor with a 12 mm trowel with semicircular notches (liquefied consistency 8.25 l water / 25 kg of dry mix) - consumption 4.6 kg/m^2 .

Important additional information

- The adhesive spreadability beneath a tile is reached when using the upper mixing ratio, i.e. approx. 0.33 l with 1 kg of dry mix. No slip is reached when using the lowest mixing ratio, i.e. 0.26 l with 1 kg of dry mix.
- When fixing the tiles on terraces divide the screed with expansion joints into max. 3 m x 3 m technological areas. It is acceptable to increase the area surface up to 25 m^2 on condition that contraction joints within the cladding are applied (recommended min. 4 cladding areas, each of 9 m^2). Keep the 1:1 - 1:2 ratio between the area sides when planning the technological areas. The screed expansion joints should be transferred onto the cladding and filled with ATLAS ARTIS silicone. The contraction joints should be filled with ATLAS ARTIS silicone. The minimum adhesive coat after pressing – 4 mm. The adhesive must fill the whole space beneath the tile.
- The time of technological breaks, product technical parameters, etc. refer to standard setting conditions, i.e. in temperature +23°C (+/- 2°C) and 55% humidity (+/- 5%), substrates defined in PN-EN 1323 standard and tiles in PN-EN 176 standard. In other thermal and humidity conditions the time indicated may vary.
- The tiles must not be soaked before fixing. When determining the adhesive thickness under the cladding, one should consider the geometric deviation of tiles shape, e.g. plane warpage.
- Conduct test application prior to natural stone tiles or glass elements fixing – apply a single tile. Keep the 60% of surface bonding (leave 40% of a tile with no contact with adhesive). Check the tile appearance after 2-3 days. The test is passed when there is no difference of shade of tile surface in contact and not in contact with the adhesive.
- Open time – from the moment of application of the adhesive to the moment of placing the tiles upon it – is limited. In order to check if it is still possible to fix tiles, performing a test is recommended. It consists in pressing your fingers against the adhesive. If the adhesive remains on the fingers, you may fix the tiles. If the fingers are clean, the old layer of the adhesive has to be removed and a new one applied.
- The tools must be cleaned with clean water directly after use. Difficult to remove residues of the set adhesive can be removed with the ATLAS AGENT FOR REMOVAL OF CEMENT DEPOSIT AND STAINS.
- Contains cement. May cause respiratory irritation. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Keep out of reach of children. Avoid breathing dust. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or a rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Follow the instructions of the Safety Data Sheet.
- The adhesive must be transported and stored in tightly sealed, original and labelled bags, most preferably on pallets. Do not expose to the direct sunlight. Keep in dry, cool and well ventilated room, away from incompatible materials (see section 10 of Safety Data Sheet), food and beverages. Protect against humidity - product gets irreversibly solid after contact with water. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%..

Packaging

Unit packaging:
Foil bags: 25 kg, 22.5 kg
Alubag: 5 kg

The above information constitutes basic guidelines for the application of the product and does not release the user from the obligation of carrying out works according to engineering principles and OHS regulations. At the time of publication of this product data sheet all previous ones become void. An up-to-date technical product documentation is available at www.atlas.com.pl/en
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