ATLAS ULTRA GEOFLEX

highly flexible deformable gel adhesive 2-15 mm

- for any type and size of tiles – ceramic, stone, glass, etc.
- for particularly difficult substrates: old tiles, terrazzo, plasterboards, OSB and damp proofing
- the widest range of use: on floor heating, terraces, in swimming pools
- no slip even in case of mega large cladding

C2TE S1

PRODUCT CONFORMS TO THE EUROPEAN STANDARD

Unique gel technology

ATLAS ULTRA GEOFLEX recipe contains unique siliceous gel technology. The siliceous gel offers exceptional ability of water retention. The gel fills pores formed at the stage of adhesive binding by the net of inorganic bonds. The accumulation of part 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 perfect bonding 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 tiles, which improves adhesion and bond durability, particularly in case of outdoor use,
- safe cladding fixing on substrates exposed to direct sunlight, both during tiling and adhesive setting (e.g. on balconies, terraces, etc.).

Properties

ATLAS ULTRA GEOFLEX is manufactured as a dry mix of high quality cement binder, aggregates and specially selected modifying agents: natural and synthetic.
Highly flexible – deformability S1 – compensates substrate deformation and internal stress.
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 slip of cladding made of tiles of any type, including large size and stone ones – enables fixing the cladding "from the top" with no need of support at the fixing stage.
Perfect stabilization of large size tiles (even > 1 m^2) fixed on horizontal surfaces – tiles do not sink in the mortar layer.
Foot traffic and grouting just after 12 hours – owing to accelerated process of adhesive setting and drying.

Use

Fixing ceramic and stone cladding - glazed tiles, terracotta, porcelain-gres and laminated porcelain-gres tiles, clinker, stone, ceramic mosaic, concrete/ cement tiles, composite, acoustic and insulation panels. If in doubt conduct an application test. The following cladding can be fixed after positive test application and if in accordance with the tile manufacturer's guidelines: marble/ natural stone cladding, glass mosaic, glass, coloured and printed tiles.
Fixing small, medium and large size claddings - small and medium size tiles (< 0.1 m^2), large size tiles (< 0.25 m^2), very large size tiles (> 0.25 m^2), slim type tiles.
Fixing cladding on horizontal and vertical surfaces, indoors and outdoors:
- in residential, public access, healthcare, educational, commercial and service, sacral, industrial buildings, multi-storey garages, industrial warehouses, infrastructure, SPA objects,
- in offices, kitchens, bathrooms, laundries, garages, showers, washes, rooms washed with plenty of water, saunas, on plinths, terraces, balconies, loggia, slab and beam stairs, communication routes, façades,
- in rooms of low, moderate and intensive traffic, rooms of small operational loads in any building type,
- in technological tanks, pools, fountains, jacuzzi, balneotechnology (with no aggressive chemicals in use).

Fixing cladding on standard substrates - cement screeds and floors both existing and newly installed, newly installed anhydrite screeds, cement, cement-lime and gypsum plasters, walls made of cellular concrete, silicate brick or hollow blocks, ceramic brick or hollow blocks, gypsum blocks.
Fixing cladding on deformable or, so called, difficult substrates – concrete, terrazzo, mineral, dispersion or reactive sealing coats, magnesium substrates, mastic asphalt substrates, dry substrates made of gypsum boards, screeds (cement and anhydrite) with water and electric heating system or with heating mats embedded, plasters with wall heating system, plasterboards, gypsum-fibre boards, cement-fibre boards, existing ceramic and stone cladding ("tile on tile"), concrete resin lacquers bonded to the substrate, dispersion, oil paints bonded to the substrate, floors made of timber (thick. > 25 mm), OSB/3, OSB/4 and chipboards (thick. >25 mm on floors and >18 mm on walls), acoustic and insulating panels, metal, steel and plastic surfaces.
Note. Check the product sheet on www.atlas.com.pl/en for more detailed info on the range of use.

Technical data

Mass bulk density (after mixing)	1.25 kg/dm^3
Mixing ratio (water/dry mix)	0.27 – 0.36 l / 1 kg 1.35 - 1.80 l / 5 kg 6.75 - 9.00 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 with cement grout*	after 12 hours
Grouting with epoxy grout*	after 48 hours
Full operation load – foot traffic*	after 3 days
Full operation load – vehicle traffic*	after 14 days
Full water load – pools/tanks*	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 S1 class adhesive. EC Declaration of Performance No. 194/CPR.

CE 0767, 1614	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Cement adhesive for tiles of enhanced parameters, extended open time and reduced slip, deformable C2TE S1 type	**for indoor and outdoor use, for walls and floors**
Reaction to fire – class	A1/A1$_{fl}$
Bonding strength - initial bonding	**≥ 1.0 N/mm^2**
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	 **≥ 1.0 N/mm^2** **≥ 1.0 N/mm^2** **≥ 1.0 N/mm^2**
Release/content of hazardous substances	See: Safety Data Sheet

The product has been given the Radiation Hygiene Certificate.

Application

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 50 or 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 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.

Detailed guidelines concerning the substrate preparation, depending on its type, are available in the product sheet on www.atlas.com.pl/en.

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) with 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 approx. 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, tiling outdoors and large size tiles fixing, 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 can start after:

- approx. 12 hours since the tiles fixing for ATLAS GROUT, ATLAS ARTIS GROUT, ATLAS DECORATIVE GROUT.
- approx. 48 hours since the tiles fixing for ATLAS EPOXY GROUT.

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.

Consumption

Average consumption listed in the table below refers to application upon even substrates. Substrate irregularities increase the actual mortar consumption.

Tile size [cm]	Place of application	Recommended notch size [mm]	Consumption [kg/m^2]
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
60 x 60	wall	10	3.0
	floor	12	3.5
100 x 100	wall	10	3.5
	floor	12 (trowel with semi-circular notches)	4.6

Important additional information

- The adhesive spreadability beneath a tile is reached when using the upper mixing ratio, i.e. approx. 0.36 l with 1 kg of dry mix. No slip is reached when using the lowest mixing ratio, i.e. 0.27 l with 1 kg of dry mix.
- 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. Tiles subject to discolouration in contact with grey cement should be applied with the use of adhesives based on white cement binder.
- Conduct test application prior to natural stone tiles or glass elements or fixing – apply a single tile. Keep the 60% bonding surface (leave 40% of 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 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 SZOP agent.
- 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 bags, in dry conditions (most preferably on pallets). Protect against humidity. Shelf life in conditions as specified is 12 months from the production date shown on the packaging. Shelf life of mortar packed in aluminum bags in conditions as specified is 24 months from the production date shown on the packaging. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

Packaging

Foil bags: 5, 25 kg
Pallet: 720 kg in 5 kg bags, 1,200 kg in 25 kg bags

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.
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