



## ADHESIVES FOR TILES

<b>ATLAS ATUT</b> adhesive for tiles 2-10 mm	8
<b>ELASTIFIED ADHESIVE MORTAR ATLAS</b> general-use adhesive 2-10 mm	10
<b>ATLAS STANDARD WHITE</b> white adhesive for gres-porcelain 2-10 mm	12
<b>ATLAS MIG 2</b> fast-setting adhesive for gres-porcelain 2-5 mm	14
<b>ATLAS ELASTYK</b> highly flexible adhesive 2-10 mm	16
<b>ATLAS GEOFLEX</b> highly flexible gel adhesive (2-15 mm)	18
<b>ATLAS PLUS</b> deformable adhesive S1 2-10 mm	20
<b>ATLAS PLUS WHITE</b> white deformable adhesive S1 2-10 mm	23
<b>ATLAS PLUS EXPRESS</b> fast-setting deformable adhesive S1 2-5 mm	26
<b>ATLAS PLUS MEGA</b> thick-coat deformable adhesive S1 4-20 mm	29
<b>ATLAS PLUS MEGA WHITE</b> white, thick-coat deformable adhesive S1 4-20 mm	32

# ADHESIVES FOR TILES

## Classification of adhesives for tiles

Adhesives for tiles are classified and labelled in accordance to PN-EN 12004+A1:2012 standard. The standard lists 3 types of adhesives:

- C – cement adhesives
- D – dispersion adhesives
- R – adhesives based on reactive resins

Each of three types of adhesives can be offered in various types (classes), referring to additional requirements:

- 1 – standard setting adhesives; adhesion after 28 days  $\geq 0.5 \text{ N/mm}^2$
- 2 – adhesives of improved parameters; adhesion after 28 days  $\geq 1.0 \text{ N/mm}^2$
- F – fast-setting adhesives; adhesion after 6 hours  $\geq 0.5 \text{ N/mm}^2$
- T – adhesives with reduced slip; slip not exceeding 0.5 mm
- E – adhesives with extended open time; adhesion after 28 days  $\geq 0.5 \text{ N/mm}^2$ , despite the fact that time between application of adhesive and placing a tile is not longer than 30 minutes

Adhesive class also shows its reaction to fire in accordance to PN-EN 13501-1 standard. All ATLAS adhesives are of A class, which means they do not have or have insignificant impact on fire spread.



Adhesives types and classes are shown in the form of pictograms:  
Cement adhesive, fast-setting, of reduced slip and extended open time.  
Example: ATLAS MIG 2  
Type and class: C1FTE



The second parameter describing an adhesive is its transverse deformability in accordance to PN-EN 12002 standard.  
This class specifies permissible level of deflection of surface with set adhesive causing no damage to it. Class S1 assumes permissible deflection within 2.5-5 mm range, S2 – above 5 mm.  
Example: ATLAS PLUS  
Type and class: C2TE  
Deformability: S1

## Adhesive selection

Before fixing ceramic or natural stone cladding, one should pay particular attention to a few elements significant for proper selection of an adhesive.

They are as follows:

**substrate** – material which it is made of, its absorptiveness, bonding, cleanliness, stabilization degree and possible deformability,

**tiles** – type (gres-porcelain, terracotta, glazed, stone), size (mosaic, large size), absorptiveness and resistance to discolouration,

**conditions of cladding use** – influence of atmospheric factors (indoors or outdoors), location (wall or floor), type and range of live load (foot or vehicle traffic), frequency and range of temperature changes.

TABLE 1.1

											
	ATLAS ATUT	ATLAS ELASTIFIED ADHESIVE/ AVAL KM 11 Plus	ATLAS MIG 2	ATLAS STANDARD WHITE	ATLAS ELASTYK/ AVAL KM 16	ATLAS GEOFLEX	ATLAS PLUS/ AVAL KM 17	ATLAS PLUS WHITE/ AVAL KM 15	ATLAS PLUS EXPRESS	ATLAS PLUS MEGA	ATLAS PLUS MEGA WHITE
PRODUCT	Adhesive for indoor and outdoor use	General purpose adhesive	Fast setting adhesive	White adhesive	Flexible adhesive	Flexible adhesive	Deformable S1 adhesive	Deformable S1 white adhesive	Deformable S1 fast setting adhesive	Deformable S1 adhesive for large size floor tiles	White, deformable S1 adhesive for large size floor tiles
Reference document	PN-EN 12004+A1:2012										
Adhesive type and class	C1T	C1TE	C1FTE	C1T	C2TE	C2TE	C2TES1	C2TES1	C2FTES1	C2ES1	C2ES1
TECHNICAL DATA											
Mixing ratio water/dry mix [l/kg]	0.21-0.24	0.21-0.24	approx. 0.22	0.26-0.28	0.25-0.27	0.26-0.33	0.31-0.33	0.26-0.28	0.21-0.23	0.21-0.24	0.21-0.24
Min/max adhesive thickness [mm]	2-10	2-10	2-5	2-10	2-10	2-15	2-10	2-10	2-5	4-20	4-20
Temperature of application [°C]	5-25	5-25	5-25	5-25	5-25	5-35	5-25	5-25	5-25	5-25	5-25
Maturing time [min]	5	5	5	5	5	5	5	5	5	5	5
Pot life [h]	4	4	1	3	4	4	5	4	1	4	4
Open time [min]	20	30	30	20	30	30	30	30	30	30	30
Adjustability time [min]	10	10	10	10	10	20	10	10	10	10	10
Floor access [h]	after ca. 24	after ca. 24	after ca. 4	after ca. 24	after ca. 24	after ca. 12	after ca. 24	after ca. 24	after ca. 4	after ca. 24	after ca. 24
Grouting [h]	after ca. 24	after ca. 24	after ca. 4	after ca. 24	after ca. 24	after ca. 12	after ca. 24	after ca. 24	after ca. 4	after ca. 24	after ca. 24
Full load	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days
TYPE OF SUBSTRATE											
Cement or gypsum plasters or screeds	✓	✓	✓	✓	✓	✓	✓	✓	✓	only on screeds	only on screeds
Damp proofing course					✓	✓	✓	✓	✓	✓	✓
OSB, chip boards, plywood (require priming)						✓	✓	✓	✓	✓	✓
Plasterboards, cement-fibre boards					✓	✓	✓	✓	✓		
Terrazzo primed with Cerplast/Aval KT 16						✓	✓	✓	✓	✓	✓
Old tiles primed with Cerplast/Aval KT 16						✓	✓	✓	✓	✓	✓
TYPE OF TILES TO BE FIXED											
Glazing tiles/ terracotta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gres-porcelain	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clinker		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mosaic		✓	✓	✓	✓		✓	✓	✓		
Absorbable stone tiles, polished gres				✓	✓**	✓	✓**	✓	✓**	✓**	✓
SPECIAL USAGE CONDITIONS											
Floor heating					✓	✓	✓	✓	✓	✓	✓
Terraces/balconies					✓*	✓*	✓	✓	✓	✓	✓
Bath- and shower-tub casing					✓	✓	✓	✓	✓		
Fireplace casing							✓	✓	✓		
Swimming pools basins							✓	✓	✓	✓	✓

\* S1 adhesive is recommended for terraces

\*\* if in doubt conduct an application test





## ATLAS ATUT

### adhesive for tiles 2-10 mm

- for small and medium size ceramic tiles, incl. gres-porcelain ones
- reduced slip
- layer thickness 2-10 mm
- for indoor and outdoor use



### Properties

ATLAS ATUT is manufactured as a dry mix of high quality cement binder, aggregates and specially selected modifiers.

Owing to the improved formula the product offers:

- **wide range of layer thickness (2-10 mm)**, therefore enables thin coat installation of the cladding, also on uneven substrates, as well as mineral substrates levelling,
- **reduced slip**, therefore enables fixing the cladding "from the top", which helps to avoid cut-to-size tiles on exposed wall zones.

### Use

**Fixing ceramic cladding** – glazed tiles, terracotta, porcelain-gres tiles, ceramic mosaic.

**Fixing small and medium size claddings (< 0.1 m<sup>2</sup>).**

**Fixing tiles on horizontal and vertical surfaces, indoors and outdoors:**

- in residential buildings,
- in kitchens, bathrooms, laundries, garages,
- on surfaces exposed to low traffic.

**Fixing cladding on standard substrates** – concrete, cement screeds and mortars, 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.

**Note.** Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.

### Technical data

Mass bulk density (after mixing)	approx. 1.5 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.21 – 0.24 l / 1 kg 4.7 – 5.4 l / 22.5 kg
Min./max. adhesive thickness	2 mm / 10 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time*	approx. 5 minutes
Pot life*	approx. 4 hours
Open time*	min. 20 minutes
Adjustability time*	10 minutes
Full operation load – foot traffic*	after approx. 3 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 C1T class adhesive. EC Declaration of Performance No. 180/CPR.

CE 0767	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Cement adhesive for tiles, normal setting, of reduced slip, C1T type	for indoor and outdoor use, for walls and floors
Reaction to fire – class	A1 A1 <sub>fl</sub>
Bonding strength - initial bonding	≥ 0.5 N/mm <sup>2</sup>
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup>
Open time - tensile adhesion after time not shorter than 20 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
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 10 mm, in case of larger irregularities use, e.g. ATLAS ZW 330 mortar, screeds ATLAS SMS, SAM or 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 heterogeneous 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](http://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) using a notched trowel. It is advisable to spread a thin adhesive coat first and then apply the coat of desired thickness 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.

### Installing 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 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 the back of a tile, 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 10 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. 24 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.

## Consumption

Average consumption: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2÷2.5	from 2.0	from 3.0
medium size up to 30 x 30 cm	≥ 8.0	3÷3.5	from 3.0	from 4.5

## Important additional information

- 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.
- When fixing the tiles on weak substrates which bearing capacity is difficult to establish (e.g. dusty, difficult to clean), it is recommended to perform an adhesion test by fixing a tile and checking the bond after 48 hours.
- 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. Content of soluble chromium (VI) in ready-to-use mix – ≤ 0.0002%.

## Packaging

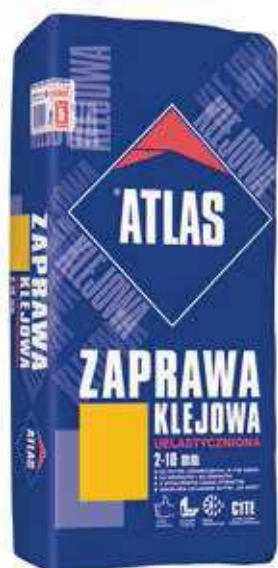
Paper bags: 22.5 kg

Pallet: 1,080 kg in 22.5 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.*  
Date of update: 2016-03-31





## ELASTIFIED ADHESIVE MORTAR ATLAS

### general-use adhesive 2-10 mm

- for small and medium size ceramic tiles, incl. gres-porcelain and concrete ones
- for bathrooms, kitchens, corridors, laundries, garages
- for walls and floors
- extended open time – possibility of bonding up to 30 minutes since the adhesive application on the substrate
- layer thickness 2-10 mm
- for mineral substrates floating
- for indoor and outdoor use, at low and average operation load



### Elastified formula

Improvement of the adhesive working parameters makes use of the mortar more pleasant and easier.

Enhancing the adhesive with plasticizing additives makes it to meet the expectation of a tiler at each stage of work.

**Mixing.** The adhesive is less susceptible to aeration and forms homogenous mixture – uniform in terms of distribution of the components within the whole mass volume. This property, backed up with the perfect selection of the aggregate composition guarantees the highest durability of the adhesive layer.

**Scooping with trowel.** The adhesive is characterized by optimum viscosity guaranteeing lossless transfer from the container onto the trowel and from the trowel onto the substrate.

**Application onto the substrate.** The adhesive spreads perfectly upon the surface – the bonding strength of the mortar is high enough to prevent the adhesive from "rolling" onto the trowel (for properly primed substrate).

**Fixing the tile.** The ideally selected viscosity allows for easier handling of the fixed tile.

### Properties

ELASTIFIED ADHESIVE MORTAR ATLAS is manufactured as a dry mix of high quality cement binder, aggregates and special composition of modifiers, including the polymers. Improved formula makes the product to reach the highest technical parameters within its class and is widely used in residential housing. Its technology offers:

- **wide range of layer thickness (2-10 mm)**, therefore enables thin coat installation of the cladding, also on uneven substrates, as well as mineral substrates levelling,
- **extended open time** – allows placing the tiles even 30 minutes since the mortar application – it can be once applied onto larger surface and therefore minimize the time of work,
- **reduced slip**, therefore enables fixing the cladding "from the top", which helps to avoid cut-to-size tiles on exposed wall zones,
- **wide range of use in residential housing:** bathrooms, kitchens, corridors, garages, staircases, walls and floors.

### Use

**Fixing ceramic cladding** – glazed tiles, terracotta, porcelain-gres tiles, ceramic mosaic, concrete and cement tiles.

**Fixing small and medium size claddings** (< 0.1 m<sup>2</sup>).

**Fixing tiles on horizontal and vertical surfaces, indoors and outdoors:**

- in residential buildings,
- in kitchens, bathrooms, laundries, garages,
- rooms of small and medium operational loads in any building type.

**Fixing cladding on standard substrates** – concrete, cement screeds and mortars, 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.

**Note.** Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.

### Technical data

Mass bulk density (after mixing)	approx. 1.75 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.21 – 0.24 l / 1 kg 1.05 – 1.20 l / 5 kg 2.10 – 2.40 l / 10 kg 5.25 – 6.00 l / 25 kg
Min./max. adhesive thickness	2 mm / 10 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time*	approx. 5 minutes
Pot life*	approx. 4 hours
Open time*	min. 30 minutes
Adjustability time*	10 minutes
Floor access/ grouting*	after approx. 24 hours
Full operation load – foot traffic*	after approx. 3 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 C1TE class adhesive. EC Declaration of Performance No. 001-1/CPR.

CE 2007	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Cement adhesive for tiles, normal setting, of extended open time and reduced slip, C1TE type	for indoor and outdoor use, for walls and floors
Reaction to fire – class	A1 WT A1 <sub>fl</sub> WT
Bonding strength - initial bonding	≥ 0.5 N/mm <sup>2</sup>
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup>
Open time - tensile adhesion after time not shorter than 30 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
Release/content of hazardous substances	See: Safety Data Sheet

## 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 10 mm, in case of larger irregularities use, e.g. ATLAS ZW 330 mortar, screeds ATLAS SMS, SAM or 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 heterogeneous 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](http://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) using a notched trowel. It is advisable to spread a thin adhesive coat first and then apply the coat of desired thickness 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.

### Installing 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 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 the back of a tile, 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 10 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. 24 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.

## Coverage

Average coverage: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2÷2.5	from 2.0	from 3.0
medium size up to 30 x 30 cm	≥ 8.0	3÷3.5	from 3.0	from 4.5

## Important additional information

- 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.
- When fixing the tiles on weak substrates which bearing capacity is difficult to establish (e.g. dusty, difficult to clean), it is recommended to perform an adhesion test by fixing a tile and checking the bond after 48 hours.
- 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. Content of soluble chromium (VI) in ready-to-use mix – ≤ 0.0002%.

## Packaging

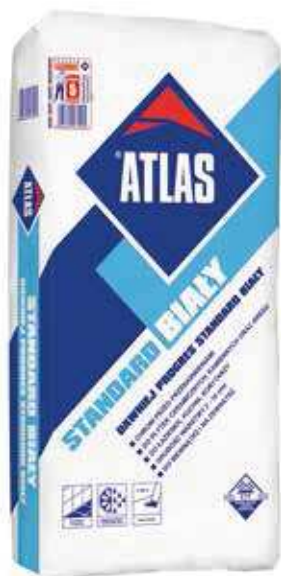
Paper bags: 5 kg, 10 kg, 25 kg.

Pallet: 1,100 kg in 5 kg bags, 1,100 kg in 10 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.*

*Date of update: 2016-03-31*



## ATLAS STANDARD WHITE

### white adhesive for gres-porcelain 2-10 mm

- for stone tiles, polished gres-porcelain
- does not cause discolouration of absorbable tiles
- reduced slip
- layer thickness 2-10 mm



### Properties

ATLAS ATUT is a general-use adhesive mortar based on cement binder, selected aggregates and special modifiers. It contains white cement and does not cause cladding discolouration, which can occur in contact with grey cement. Owing to the special recipe ATLAS STANDARD WHITE offers:

- **wide range of layer thickness (2-10 mm)**, therefore enables thin coat installation of the cladding, also on uneven substrates, as well as mineral substrates levelling,
- **reduced slip**, therefore enables fixing the cladding "from the top", which helps to avoid cut-to-size tiles on exposed wall zones,
- **no discolouration of tiles of high absorbability**, therefore enables use of cladding made of polished gres-porcelain and natural stone.

### Use

**Fixing ceramic and stone cladding** - glazed tiles, terracotta, porcelain-gres tiles, ceramic mosaic, concrete and cement tiles, marble and natural stone tiles.

**Fixing small and medium size claddings (< 0.1 m²).**

**Fixing tiles on horizontal and vertical surfaces, indoors and outdoors:**

- in residential buildings,
- in kitchens, bathrooms, laundries, garages,
- on surfaces exposed to low traffic.

**Fixing cladding on standard substrates** – concrete, cement screeds and mortars, 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.

**Note.** Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.

### Technical data

Mass bulk density (after mixing)	approx. 1.7 kg/dm³
Mixing ratio (water/dry mix)	0.26 – 0.28 l / 1 kg 6.5 - 7.0 l / 22.5 kg
Min./max. adhesive thickness	2 mm / 10 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time*	5 minutes
Pot life*	approx. 3 hours
Open time*	min. 20 minutes
Adjustability time*	10 minutes
Floor access/ grouting*	after approx. 24 hours
Full operation load – foot traffic*	after approx. 3 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 C1T class adhesive. EC Declaration of Performance No. 180/CPR

CE 0767	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Cement adhesive for tiles, normal setting, of reduced slip, C1T type	for indoor and outdoor use, for walls and floors
Reaction to fire – class	A1 A1 <sub>fl</sub>
Bonding strength - initial bonding	≥ 0.5 N/mm²
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 0.5 N/mm² ≥ 0.5 N/mm² ≥ 0.5 N/mm²
Open time - tensile adhesion after time not shorter than 20 minutes	≥ 0.5 N/mm²
Slip	≤ 0.5 mm
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 10 mm, in case of larger irregularities use, e.g. ATLAS ZW 330 mortar, screeds ATLAS SMS, SAM or 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 heterogeneous 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](http://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) using a notched trowel. It is advisable to spread a thin adhesive coat first and then apply the coat of desired thickness 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.

### Installing the tiles

After the application, the adhesive retains its properties for approx. 20 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 the back of a tile, 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 10 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. 24 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.

## Consumption

Average consumption: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2÷2.5	from 2.0	from 3.0
medium size up to 30 x 30 cm	≥ 8.0	3÷3.5	from 3.0	from 4.5

## Important additional information

- 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.
- When fixing the tiles on weak substrates whose bearing capacity is difficult to establish (e.g. dusty, difficult to clean), it is recommended to perform an adhesion test by fixing a tile and checking the bond after 48 hours.
- 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. Content of soluble chromium (VI) in ready-to-use mix – ≤ 0.0002%.

## Packaging

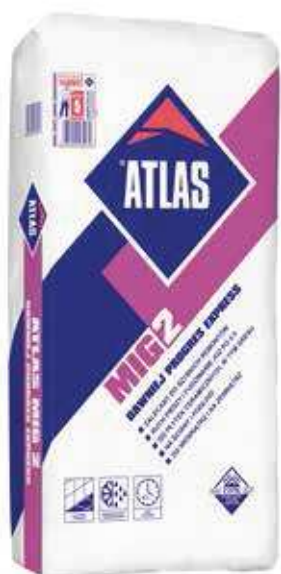
Foil bags: 25 kg

Pallet: 1,050 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.*

*Date of update: 2016-03-31*



**C1FTE**  
PRODUCT CONFORMS  
TO THE EUROPEAN  
STANDARD



## ATLAS MIG 2

### fast-setting adhesive for gres-porcelain 2-5 mm

- foot traffic and grouting just after 4 hours
- for small and medium size ceramic tiles, incl. gres-porcelain ones
- extended open time – possibility of bonding up to 30 minutes since the adhesive application on the substrate
- for bathrooms, kitchens, corridors
- for indoor and outdoor use

### Properties

ATLAS MIG 2 is manufactured as a dry mix of high quality cement binder, aggregates and specially selected modifiers.

Owing to the improved formula the product offers:

- **short setting time** – foot traffic and grouting just after 4 hours since the tiles fixing, which is expected wherever excluding the renovated surface from usage is problematic or impossible – banks, shops, railway stations, restaurants, outpatient clinics, corridors, communication routes; combination of the fast drying ATLAS UNI-GRUNT priming emulsion (drying time 2 h), ATLAS MIG 2 adhesive (setting time 4 h) and ATLAS ARTIS grout (setting time 3 h), allows pedestrian access already after approx. 9 hours since the substrate priming,
- **extended open time** – allows placing the tiles even 30 minutes since the mortar application – it can be once applied onto larger surface and therefore minimize the time of work,
- **reduced slip**, therefore enables fixing the cladding “from the top”, which helps to avoid cut-to-size tiles on exposed wall zones,

### Use

**Fixing ceramic cladding** – glazed tiles, terracotta, porcelain-gres tiles, ceramic mosaic, concrete and cement tiles.

**Fixing small and medium size claddings** (< 0.1 m<sup>2</sup>).

**Fixing tiles on horizontal and vertical surfaces, indoors and outdoors:**

- in residential buildings,
- in kitchens, bathrooms, laundries, garages,
- in rooms of small and medium operation load in any building type.

**Fixing cladding on standard substrates** – concrete, cement screeds and mortars, 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.

**Note.** Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.

### Technical data

Mass bulk density (after mixing)	approx. 1.65 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.22 l / 1 kg 5.5 l / 25 kg
Min./max. adhesive thickness	2 mm / 5 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time*	5 minutes
Pot life*	approx. 1 hour
Open time*	min. 30 minutes
Adjustability time*	10 minutes
Floor access/ grouting*	after approx. 4 hours
Full operation load – foot traffic*	after approx. 3 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. EC Declaration of Performance No. 087/CPR.

<b>CE</b> 0767	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Cement adhesive for tiles, fast-setting, of reduced slip and extended open time, C1FTE type	for indoor and outdoor use, for walls and floors
Reaction to fire – class	A1 A1 <sub>n</sub>
<b>Bonding strength</b> - initial bonding - early bonding (after ≤ 6 hours)	≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup>
<b>Durability</b> - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup>
<b>Open time</b> - tensile adhesion after time not shorter than 20 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
Release/content of hazardous substances	See: Safety Data Sheet

## 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 5 mm, in case of larger irregularities use, e.g. ATLAS ZW 330 mortar, screeds ATLAS SMS, SAM or 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 heterogeneous 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](http://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. 1 hour.

### 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 spread a thin adhesive coat first and then apply the coat of desired thickness 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.

### Installing 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 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 the back of a tile, 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 10 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 DECO-RATIVE GROUT or ATLAS EPOXY GROUT can start after approx. 4 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.

## Consumption

Average consumption: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2÷2.5	from 2.0	from 3.0
medium size up to 30 x 30 cm	≥ 8.0	3÷3.5	from 3.0	from 4.5

## Important additional information

- 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.
- When fixing the tiles on weak substrates whose bearing capacity is difficult to establish (e.g. dusty, difficult to clean), it is recommended to perform an adhesion test by fixing a tile and checking the bond after 48 hours.
- Higher air humidity or low temperature extend the setting time of 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 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. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

## Packaging

Foil bags: 25 kg

Pallet: 1,050 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.*

*Date of update: 2016-03-17*



## Optimum formula

ATLAS ELASTYK is a standard cement adhesive of improved bonding to be used with ceramic, stone and glass cladding of any type. Owing to the special recipe ATLAS ELASTYK offers:

- **wide range of use** – owing to bonding additives, the adhesive is characterized by high bonding to various tile types (also large size ones) and substrates,
- **easy and quick application** – more effective tiling owing to extended open time and reduced slip,
- **durability** – owing to flexibility, the adhesive is characterized by improved resistance to thermal and mechanical loads (e.g. with floor and wall heating system, plasterboards, elastic damp proofing of WODER E, WODER W or WODER DUO type).

## Properties

ATLAS ELASTYK is manufactured as a dry mix of high quality cement binder, aggregates and special composition of modifiers.

**With improved bonding** – minimum bonding to the substrate is 1.0 N/mm<sup>2</sup>.

**Range of adhesive thickness (2-10 mm) enables:**

- thin-coat cladding fixing on even substrates,
  - thin-coat cladding fixing on uneven substrates, preceded by substrate floating,
- Extended open time** - allows placing the tiles even 30 minutes since the mortar application – it can be once applied onto larger surface and therefore minimize the time of work.

**Reduced slip** - enables fixing the cladding "from the top" – proper consistency and layer thickness eliminate the adhesive slip. Therefore one can tile from the wall top and avoid cut-to-size tiles on exposed wall zones.

## Use

**Fixing ceramic and stone cladding of any type** - glazed tiles, terracotta, porcelain-gres tiles, clinker, stone, ceramic mosaic, concrete and cement tiles, marble / natural stone cladding insusceptible to discolouration, glass mosaic and tiles. If in doubt conduct an application test.

**Fixing small, medium and large size claddings** - small and medium size tiles (< 0.1 m<sup>2</sup>), large size tiles (< 0.25 m<sup>2</sup>).

**Fixing cladding on horizontal and vertical surfaces, indoors and outdoors:**

- in residential, public access, healthcare, commercial and service, sacral buildings,
- in kitchens, bathrooms, laundries, offices, garages, communication routes, in rooms of small and medium operation load, on façades.

**Fixing cladding on standard substrates** - cement screeds and mortars, 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 substrates or, so called, difficult substrates** – concrete, elastic and rigid damp proofing (e.g. WODER S, WODER E, WODER W or WODER DUO), mineral, dispersion and reactive sealing coats, 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.

# ATLAS ELASTYK

## highly flexible adhesive 2-10 mm

- for various types of ceramic, stone, concrete cladding and glass mosaic
- for small, medium and large size tiles
- for residential, commercial, public access buildings
- high bonding and flexibility
- for standard substrates – walls, plasters, screeds
- for plasterboards
- for floor and wall heating systems, sealing coats, façades



## Technical data

Mass bulk density (after mixing)	approx. 1.6 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.25 ÷ 0.27 l / 1 kg 6.25 ÷ 6.75 l / 25 kg
Min./max. adhesive thickness	2 mm / 10 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	5 minutes
Pot life*	approx. 4 hours
Open time*	min. 30 minutes
Adjustability time*	10 minutes
Floor access/ grouting*	after 24 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. EC Declaration of Performance No. 100/CPR.

CE 2007, 0767	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Cement adhesive for tiles of enhanced parameters, extended open time and reduced slip C2TE type	for indoor and outdoor use, for walls and floors
Reaction to fire – class	A1 A1 <sub>n</sub>
Bonding strength - initial bonding	≥ 1.0 N/mm <sup>2</sup>
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup>
Open time - tensile adhesion after time not shorter than 30 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
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 10 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 agent.
- **primed with:**
  - ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS – substrates of excessive or heterogeneous 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](http://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) using a notched trowel. It is advisable to spread a thin adhesive coat first and then apply the coat of desired thickness 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.

### Installing 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 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 the back of a tile, 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. 24 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.

## Coverage

Average coverage: approx. 1 m<sup>2</sup> / 1 mm/ 1.5 kg of dry mix – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2÷2.5	from 2.0	from 3.0
medium size up to 30 x 30 cm	≥ 8.0	3÷3.5	from 3.0	from 4.5
large size up to 50 cm x 50 cm	≥ 10.0	4÷4.5	from 4.0	from 6.0

## Important additional information

- 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.
- 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. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

## Packaging

Foil bags: 25 kg

Pallet: 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.*

*Date of update: 2016-03-31*





## ATLAS GEOFLEX

### highly flexible gel adhesive (2-15 mm)

- no slip or full spreading beneath 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



### 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

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

**Fixing ceramic and stone cladding** - glazed tiles, terracotta, porcelain-gres tiles, marble/natural stone, cladding insusceptible to discolouration, clinker, stone, ceramic mosaic, glass mosaic, glass tiles, concrete/ cement tiles. If in doubt conduct an application test.

**Fixing small, medium and large size claddings** - small and medium size tiles (< 0.1 m<sup>2</sup>), large size tiles (> 0.25 m<sup>2</sup>).

**Fixing the cladding on horizontal and vertical surfaces, indoors and outdoors:**

- in residential, public access, healthcare, commercial and service, sacral buildings,
- in kitchens, bathrooms, laundries, garages, showers, washes, rooms washed with plenty of water, on terraces, balconies, loggia, communication routes, in rooms of small and medium operational loads in any building type.

**Fixing the cladding on standard substrates** - cement screeds and mortars, anhydrite screeds, cement, cement-lime and gypsum plasters, walls made of cellular concrete, silicate brick or hollow blocks, ceramic brick or hollow blocks, floors made of wood, OSB, dry gypsum screed, steel, plastic substrates.

**Fixing the cladding on deformable substrates or, so called, difficult substrates** - concrete, terrazzo, elastic and rigid damp proofing (e.g. WODER S, WODER E,

WODER W or WODER DUO), magnesium substrates, dry substrates made of gypsum boards, screeds (cement and anhydrite) with water and electric heating system or with heating mats embedded, gypsum blocks, 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, mineral, dispersion and reactive sealing coats, wooden floors (thick. >25 mm), OSB/3, OSB/4 and chipboards (thick. >25 mm on floors and >18 mm on walls).

**Floating standard and difficult substrates listed above.**

**Note.** Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.

### Technical data


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

Mass bulk density (after mixing)	ca. 1.6 kg/dm <sup>3</sup>
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. EC Declaration of Performance No. 186/CPR.

 0767, 1614	PN-EN 12004 + A1:2012 (EN 12004:2007 + A1:2012)
Cement-based adhesive of enhanced parameters, extended open time and reduced slip C2TE type	for indoor and outdoor use, for walls and floors
Reaction to fire – class	A1 A1 <sub>fl</sub>
Bonding strength - initial adhesion	≥ 1.0 N/mm <sup>2</sup>
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup>
Open time - tensile adhesion after time not shorter than 30 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
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 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 heterogeneous 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](http://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) 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.

## Consumption

Average consumption: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the bottom side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2.0	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2.0÷2.5	from 2.0	from 3.0
medium size up to 30 x 30 cm	≥ 8.0	3.0÷3.5	from 3.0	from 4.5
large size up to 50 x 50 cm	≥ 10.0	4.0÷4.5	from 4.0	from 6.0

## 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<sup>2</sup> on condition that contraction joints within the cladding are applied (recommended min. 4 cladding areas, each of 9 m<sup>2</sup>). 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. Tiles subject to discolouration in contact with grey cement should be applied with the use of adhesives based on white cement binder.
- 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. Content of soluble chromium (VI) in ready-to-use mix - ≤ 0.0002%.

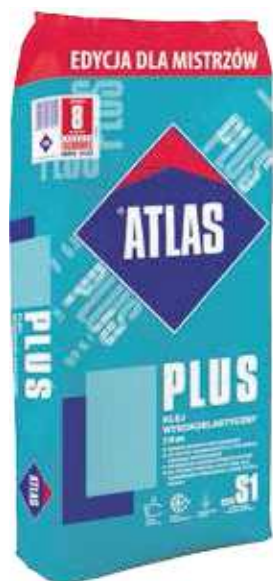
## Packaging

Foil bags: 25 kg  
Pallet: 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.*

*Date of update: 2016-06-16*



## ATLAS PLUS

### deformable adhesive S1 2-10 mm

- for any type of ceramic, stone, glass cladding, composite panels
- for large size tiles (>1 m<sup>2</sup>)
- for difficult substrates: OSB boards, old tiles, wooden floors, metal and plastic surfaces
- on terraces, balconies and façades, in pools and technological tanks (also with drinking water)
- for residential, commercial and service, public access and industrial buildings



### Polymer technology

The polymer technology is used in the ATLAS PLUS recipe. Owing to the high content of redispersible polymer resins, the cement adhesive gets unique properties and offers the highest technical and operation parameters assuring long term durability. The presence of polymers ensures high bonding of any cladding to any substrate type, including, so called, difficult and critical ones. Owing to the interchange of the polymer network with the network of inorganic hydration cement bindings, the adhesive offers outstanding parameters:

**The use of the polymer technology gives:**

- possibility of fixing the cladding of any type, both absorbable and non-absorbable – owing to high bonding resulting from high content of the polymer resin,
- possibility of fixing the tiles on, so called, difficult substrates, including OSB boards, plasterboards, old tiles (tile on tile) as well as substrates subject to large and very large mechanical and thermal load – owing to the deformability,
- outstanding plasticity and mass homogeneity – the adhesive is easily workable and spread upon the surface – the adhesion strength prevents the adhesive from “rolling back” onto the trowel.

**Reinforcement with fibers**

- The structural reinforcement with cellulose fibers helps to compensate the stress occurring on deformable substrates.
- The fibers improve water retention of the adhesive: limit the effects of sudden water retention within the joint with both absorbable substrate and absorbable tile as well as within the evaporation zone. During the adhesive setting and drying (particularly when applied with maximum thickness) the fibers accumulate and transfer water keeping its uniform level within the whole coat.

### Properties

ATLAS PLUS – is manufactured as a dry mix of high quality cement binder, aggregates and special composition of modifiers.

**Highly flexible – deformability S1** – the permissible deflection of the set adhesive is within 2.5 – 5 mm range (test according to PN-EN 12002).

**With improved bonding** – the actual bonding to concrete substrate in standard conditions is two times higher than the one required by the PN-EN 12004 standard.

**Range of adhesive thickness (2-10 mm) enables:**

- thin-coat cladding fixing on even substrates,
- thin-coat cladding fixing on uneven substrates, preceded by substrate floating.

**Extended open time** – allows placing the tiles even 30 minutes since the mortar application – it can be once applied onto larger surface and therefore minimize the time of work.

**Reduced slip** – enables fixing the cladding “from the top” – proper consistency and layer thickness eliminate the adhesive slip. Therefore one can tile from the wall top and avoid cut-to-size tiles on exposed wall zones.

**Versatility of use** – the adhesive is designed for almost any cladding type, regardless the tile size, on various substrates, in any building type, even with high operation load.

**Recommended for fixing tiles in drinking water reservoirs, food industry, healthcare buildings, nurseries, kindergartens, etc.**

### Use

**Fixing ceramic and stone cladding of any type** – glazed tiles, terracotta, porcelain-gres tiles, clinker, stone, ceramic mosaic, concrete and cement tiles, marble/natural stone cladding insusceptible to discolouration, glass mosaic and tiles, laminated porcelain-gres tiles, composite panels, insulation and acoustic panels. If in doubt conduct an application test.

**Fixing small, medium and large size claddings** – small and medium size tiles (< 0.1 m<sup>2</sup>), large (< 0.25 m<sup>2</sup>) and very large size tiles (> 0.25 m<sup>2</sup>), slim-type tiles.

**Fixing cladding on horizontal and vertical surfaces, indoors and outdoors:**

- in residential, public access, healthcare, commercial and service, sacral, industrial buildings,
- in kitchens, bathrooms, laundries, showers, washes, rooms washed with plenty of water, offices, warehouses, garages, communication routes, on balconies, terraces, loggias, façades (incl. ETICS systems), external stairs, infrastructure,
- technological tanks, pools, fountains, jacuzzi, balneotechnology (with no aggressive chemicals in use), drinking water reservoirs, sauna, SPA,
- in rooms of small, medium and large operation load,

**Fixing cladding on standard substrates** – cement screeds and mortars, 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 substrates or, so called, difficult substrates** – concrete, terrazzo, elastic and rigid damp proofing (e.g. WODER S, WODER E, WODER W or WODER DUO), magnesium 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, mineral, dispersion and reactive sealing coats, wooden floors (thick. >25 mm), OSB/3, OSB/4 and chipboards (thick. >25 mm on floors and >18 mm on walls), insulation and acoustic panels, metal, steel and plastic surfaces, mastic asphalt screeds. If in doubt conduct an application test.

**Note. Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.**


## Technical data

Mass bulk density (after mixing)	approx. 1.8 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.31 – 0.33 l / 1 kg 1.55 – 1.65 l / 5 kg 3.10 – 3.30 l / 10 kg 6.20 – 6.60 l / 20 kg 7.75 – 8.25 l / 25 kg
Min./max. adhesive thickness	2 mm / 10 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	approx. 5 minutes
Pot life*	approx. 5 hours
Open time*	min. 30 minutes
Adjustability time*	approx. 10 minutes
Floor access/ grouting*	after 24 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 S1 class adhesive. EC Declaration of Performance No. 1002/CPR.

 2007, 0767	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	A2-s1, d0 A1 <sub>fl</sub> s1
Bonding strength - initial bonding	≥ 1.0 N/mm <sup>2</sup>
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup>
Open time - tensile adhesion after time not shorter than 30 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
Transverse deformation	≥ 2.5 mm and < 5 mm
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 10 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 agent.
- **primed with:**
  - ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS – substrates of excessive or heterogeneous 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](http://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. 5 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 spread a thin adhesive coat first and then apply the coat of desired thickness 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.

### Installing 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 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 the back of a tile, 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 10 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. 24 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.

## Coverage

Average coverage: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2.0	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2.0÷2.5	from 2.0	from 3.0
medium size up to 30 x 30 cm	≥ 8.0	3.0÷3.5	from 3.0	from 4.5
large size up to 50 x 50 cm	≥ 10.0	4.0÷4.5	from 3.0	from 6.0
large size over 50 x 50 cm	12	6.0÷7.0	not recommended	from 9.0

## Important additional information

- 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.
- 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.
- Water reservoirs designated for drinking water should be washed with water after the product ageing.
- 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. Content of soluble chromium (VI) in ready-to-use mix -  $\leq 0.0002\%$ .

## Packaging

Foil bags: 5, 10, 25 kg

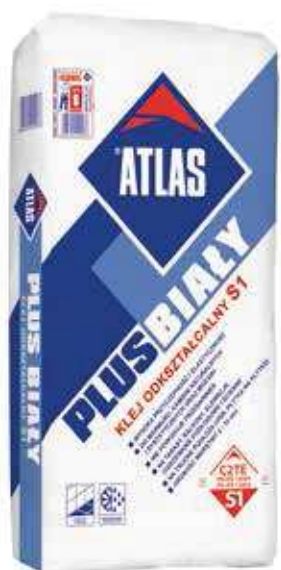
Pallet: : 1,050 kg in 5 kg bags, 1,100 kg in 10 kg bags, 1,200 kg in 25 kg bags

*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.*

*Date of update: 2016-03-31*





**C2TES1**  
PRODUCT CONFORMS  
TO THE EUROPEAN  
STANDARD



## ATLAS PLUS WHITE

### white deformable adhesive S1 2-10 mm

- for any type of ceramic, stone, glass cladding, composite panels
- for large size tiles (>1 m<sup>2</sup>)
- for difficult substrates: OSB boards, old tiles, wooden floors, metal and plastic surfaces
- on terraces, balconies and façades, in pools and technological tanks (also with drinking water)
- for residential, commercial and service, public access and industrial buildings
- with white cement, which does not cause cladding discolouration which can occur in contact with grey cement

### Polymer technology

The polymer technology is used in the ATLAS PLUS recipe. Owing to the high content of redispersible polymer resins, the cement adhesive gets unique properties and offers the highest technical and operation parameters assuring long term durability. The presence of polymers ensures high bonding of any cladding to any substrate type, including, so called, difficult and critical ones. Owing to the interchange of the polymer network with the network of inorganic hydration cement bindings, the adhesive offers outstanding parameters. The content of white cement limits the risk of the discolouration of the cladding.

#### The use of the polymer technology gives:

- possibility of fixing the cladding of any type, both absorbable and non-absorbable – owing to high bonding resulting from high content of the polymer resin,
- possibility of fixing the tiles on, so called, difficult substrates, including OSB boards, plasterboards, old tiles (tile on tile) as well as substrates subject to large and very large mechanical and thermal load – owing to the deformability,
- outstanding plasticity and mass homogeneity – the adhesive is easily workable and spread upon the surface – the adhesion strength prevents the adhesive from "rolling back" onto the trowel.

### Properties

ATLAS PLUS WHITE is manufactured as a dry mix of high quality cement binder, aggregates and special composition of modifiers.

**Does not cause cladding discolouration** – perfect for fixing glass mosaic and glass blocks installation – owing to high bonding and white cement.

**Highly flexible – deformability S1** – the permissible deflection of the set adhesive is within 2.5 – 5 mm range (test according to PN-EN 12002).

**With improved bonding** – the actual bonding to concrete substrate in standard conditions is two times higher than the one required by the PN-EN 12004 standard.

**Range of adhesive thickness (2-10 mm) enables:**

- thin-coat cladding fixing on even substrates,
- thin-coat cladding fixing on uneven substrates, preceded by substrate floating.

**Extended open time** - allows placing the tiles even 30 minutes since the mortar application – it can be once applied onto larger surface and therefore minimize the time of work.

**Reduced slip** - enables fixing the cladding "from the top" – proper consistency and layer thickness eliminate the adhesive slip. Therefore one can tile from the wall top and avoid cut-to-size tiles on exposed wall zones.

**Versatility of use** – the adhesive is designed for almost any cladding type, regardless the tile size, on various substrates, in any building type, even with high operation load.

**Recommended for fixing tiles in drinking water reservoirs, food industry, healthcare buildings, nurseries, kindergartens, etc.**

### Use

**Fixing ceramic and stone cladding of any type** - glazed tiles, terracotta, porcelain-gres tiles, clinker, stone, ceramic mosaic, concrete and cement tiles, marble / natural stone cladding insusceptible to discolouration, glass mosaic and tiles, laminated porcelain-gres tiles, composite panels, insulation and acoustic panels. If in doubt conduct an application test.

**Fixing small, medium and large size claddings** - small and medium size tiles (< 0.1 m<sup>2</sup>), large (< 0.25 m<sup>2</sup>) and very large size tiles (> 0.25 m<sup>2</sup>), slim-type tiles.

**Fixing cladding on horizontal and vertical surfaces, indoors and outdoors:**

- in residential, public access, healthcare, commercial and service, sacral, industrial buildings,
- in kitchens, bathrooms, laundries, showers, washes, rooms washed with plenty of water, offices, warehouses, garages, communication routes, on balconies, terraces, loggias, façades (incl. ETICS systems), external stairs, infrastructure,
- technological tanks, pools, fountains, jacuzzi, balneotechnology (with no aggressive chemicals in use), drinking water reservoirs, sauna, SPA,
- in rooms of small, medium and large operation load,

**Fixing cladding on standard substrates** - cement screeds and mortars, 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 substrates or, so called, difficult substrates** – concrete, terrazzo, elastic and rigid damp proofing (e.g. WODER S, WODER E, WODER W or WODER DUO), magnesium 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, mineral, dispersion and reactive sealing coats, wooden floors (thick. >25 mm), OSB/3, OSB/4 and chipboards (thick. >25 mm on floors and >18 mm on walls), insulation and acoustic panels, metal, steel and plastic surfaces, mastic asphalt screeds. If in doubt conduct an application test.

**Note. Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.**


## Technical data

Mass bulk density (after mixing)	approx. 1.6 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.26 – 0.28 l / 1 kg 1.30 – 1.40 l / 5 kg 6.50 – 7.00 l / 25 kg
Min./max. adhesive thickness	2 mm / 10 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	approx. 5 minutes
Pot life*	approx. 4 hours
Open time*	min. 30 minutes
Adjustability time*	approx. 10 minutes
Floor access/ grouting*	after 24 hours
Full operation load – foot traffic*	after 3 days
Full operation load – vehicle traffic*	after 14 days
Floor heating (warm surface)*	approx. 1.6 kg/dm <sup>3</sup>

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. 1030/CPR.

 2007, 0767	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 <sub>fl</sub>
Bonding strength – initial bonding	≥ 0.5 N/mm <sup>2</sup>
Durability – bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup>
Open time – tensile adhesion after time not shorter than 20 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
Transverse deformation	≥ 2.5 mm and < 5 mm
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 10 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 agent.
- **primed with:**
  - ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS – substrates of excessive or heterogeneous 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](http://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) using a notched trowel. It is advisable to spread a thin adhesive coat first and then apply the coat of desired thickness 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.

### Installing 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 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 the back of a tile, 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 10 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 DECO-RATIVE GROUT or ATLAS EPOXY GROUT can start after approx. 24 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.

## Coverage

Average coverage: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2÷2.5	from 2.0	from 3.0
medium size up to 30 x 30 cm	≥ 8.0	3÷3.5	from 3.0	from 4.5
large size up to 50 x 50 cm	≥ 10.0	4.0÷4.5	from 4.0	from 6.0
large size over 50 x 50 cm	10	6.0÷7.0	not recommended	from 9.0

## Important additional information

- 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.
- In case of fixing thin marble tiles temporary discolouration may occur due to high water absorption of marble. Fixed marble goes back to the previous colour after approx. 7 days, i.e. when it is completely dry.
- 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.
- Water reservoirs designated for drinking water should be washed with water after the product ageing.
- 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. Content of soluble chromium (VI) in ready-to-use mix -  $\leq 0.0002\%$ .

## Packaging

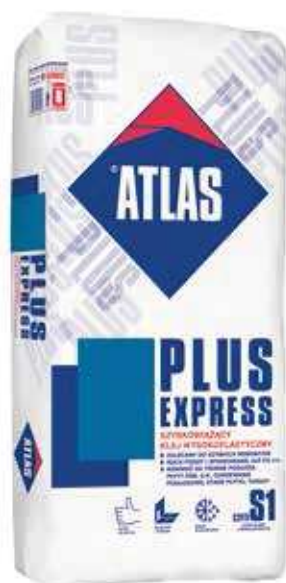
Foil bags: 5, 25 kg

Pallet: : 1,050 kg in 5 kg bags, 1,050 kg in 25 kg bags

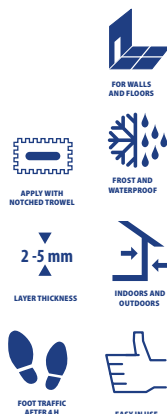
*The above information constitutes basic guidelines for the application of the product and does not release the user from the obligation of carrying out works according to engineering principles and OHS regulations.*

*At the time of publication of this product data sheet all previous ones become void.*

*Date of update: 2016-03-31*



**C2FTE S1**  
PRODUCT CONFORMS  
TO THE EUROPEAN  
STANDARD



## ATLAS PLUS EXPRESS

### fast-setting deformable adhesive S1 2-5 mm

- for projects requiring quick work progress and possibility of almost immediate use
- for any type of ceramic, stone, glass cladding, composite panels
- for small, medium and large size tiles
- for difficult substrates: floor heating systems, OSB and plasterboards, old tiles, wooden floors, metal and plastic surfaces
- on terraces, balconies and façades, in pools and technological tanks
- for residential, commercial and service, public access and industrial buildings

### Polymer technology

The polymer technology is used in the ATLAS PLUS recipe. Owing to the high content of redispersible polymer resins, the cement adhesive gets unique properties and offers the highest technical and operation parameters assuring long term durability. The presence of polymers ensures high bonding of any cladding to any substrate type, including, so called, difficult and critical ones. Owing to the interchange of the polymer network with the network of inorganic hydration cement bindings, the adhesive offers outstanding parameters. The use of fast-setting cement enables rapid growth of bonding and strength not later than 6 hours since the tiles fixing.

#### The use of the polymer technology gives:

- possibility of fixing the cladding of any type, both absorbable and non-absorbable – owing to high bonding resulting from high content of the polymer resin,
- possibility of fixing the tiles on, so called, difficult substrates, including OSB boards, plasterboards, old tiles (tile on tile) as well as substrates subject to large and very large mechanical and thermal load – owing to the deformability,
- outstanding plasticity and mass homogeneity – the adhesive is easily workable and spread upon the surface – the adhesion strength prevents the adhesive from “rolling back” onto the trowel.

#### Reinforcement with fibers

- the structural reinforcement with cellulose fibers helps to compensate the stress occurring on deformable substrates.
- the fibers improve water retention of the adhesive: limit the effects of sudden water retention within the joint with both absorbable substrate and absorbable tile as well as within the evaporation zone. During the adhesive setting and drying (particularly when applied with maximum thickness) the fibers accumulate and transfer water keeping its uniform level within the whole coat.

### Properties

ATLAS PLUS EXPRESS is manufactured as a dry mix of high quality cement binder, aggregates and specially selected modifiers.

**Highly flexible – deformability S1** – the permissible deflection of the set adhesive is within 2.5 – 5 mm range (test according to PN-EN 12002).

**Fast-setting – ensures rapid growth of strength parameters** – very high early bonding enables walking on tiles and grouting just after 4 hours, and foot and vehicle traffic just after 1 day since the tiles fixing.

**With improved bonding and durability** – the actual bonding to concrete substrate after 28 days, also after thermal ageing, immersion in water, freeze and thaw cycles in standard conditions, is two times higher than the one required by the PN-EN 12004 standard.

**Extended open time** – allows placing the tiles even 30 minutes since the mortar application – it can be once applied onto larger surface and therefore minimize the time of work.

**Reduced slip** – enables fixing the cladding “from the top” – proper consistency and layer thickness eliminate the adhesive slip. Therefore one can tile from the wall top and avoid cut-to-size tiles on exposed wall zones.

**Limits the influence of atmospheric conditions on the cladding installation**

**correctness** – enables quick and safe tiling in unpredictable atmospheric conditions. The optimum pace of work and reaching the operation parameters rapidly limit the risk of damage to the cladding installed indoors.

**Recommended for fixing wall and floor tiles in individual construction, industrial, commercial, health care buildings, in nurseries and kindergartens, etc., anywhere where the quick progress of work and almost immediate possibility of the surface use is expected.**

### Use

**Fixing ceramic and stone cladding of any type** – glazed tiles, terracotta, porcelain-gres tiles, clinker, ceramic mosaic, concrete and cement tiles, marble/ natural stone cladding insusceptible to discolouration, glass mosaic and tiles, laminated porcelain-gres tiles, composite panels, insulation and acoustic panels. If in doubt conduct an application test.

**Fixing small, medium and large size claddings** – small and medium size tiles (< 0.1 m<sup>2</sup>), large (< 0.25 m<sup>2</sup>).

**Fixing cladding on horizontal and vertical surfaces, indoors and outdoors:**

- in residential, public access, healthcare, commercial and service, sacral, industrial buildings,
- in kitchens, bathrooms, laundries, showers, washes, rooms washed with plenty of water, offices, warehouses, garages, communication routes, on balconies, terraces, loggias, façades (incl. ETICS systems), external stairs, infrastructure,
- technological tanks, pools, fountains, jacuzzi, balneotechnology (with no aggressive chemicals in use), sauna, SPA,
- in rooms of small, medium and large operation load,

**Fixing cladding on standard substrates** – cement screeds and mortars, 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 substrates or, so called, difficult substrates** – concrete, terrazzo, elastic and rigid damp proofing (e.g. WODER S, WODER E, WODER W or WODER DUO), magnesium 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, mineral, dispersion and reactive sealing coats, wooden floors (thick. >25 mm), OSB/3, OSB/4 and chipboards (thick. >25 mm on floors and >18 mm on walls), insulation and acoustic panels, metal, steel and plastic surfaces, mastic asphalt screeds. If in doubt conduct an application test.

**Note.** Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.


## Technical data

Mass bulk density (after mixing)	approx. 1.55 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.21 – 0.23 l / 1 kg 5.25 – 5.75 l / 25 kg
Min./max. adhesive thickness	2 mm / 5 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	approx. 5 minutes
Pot life*	approx. 1 hours
Open time*	min. 30 minutes
Adjustability time*	approx. 10 minutes
Floor access/ grouting*	after approx. 4 hours
Full operation load – foot traffic*	after 3 days
Full operation load – vehicle traffic*	after 14 days
Full water load – pool/tank*	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 C2FTE S1 class adhesive. EC Declaration of Performance No. 1087/CPR.

 2007, 0767	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
<b>Cement adhesive for tiles of enhanced parameters, fast-setting, extended open time and reduced slip, deformable, C2FTE S1 type</b>	<b>for indoor and outdoor use, for walls and floors</b>
Reaction to fire – class	A2-s1, d0 A1 <sub>fl</sub> ≤ 1
<b>Bonding strength</b> - initial bonding - early bonding (after ≤ 6 hours)	≥ 1.0 N/mm <sup>2</sup> ≥ 0.5 N/mm <sup>2</sup>
<b>Durability</b> - bonding after: - thermal ageing - immersion in water - freeze-thaw cycles	≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup>
<b>Open time</b> - tensile adhesion after time not shorter than 30 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
Transverse deformation	≥ 2.5 mm and < 5 mm
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 5 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 agent.
- **primed with:**
  - ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS – substrates of excessive or heterogeneous 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](http://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. 1 hour.

### 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 spread a thin adhesive coat first and then apply the coat of desired thickness 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.

### Installing 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 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 the back of a tile, 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 10 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. 4 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.

## Coverage

Average coverage: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	2/3 surface contact [kg/m <sup>2</sup> ]	Full surface contact [kg/m <sup>2</sup> ]
mosaic up to 2 x 2 cm	4.0	2.0	from 2.0	from 3.0
small size up to 10 x 10 cm	≥ 6.0	2.0÷2.5	from 2.0	from 3.0
large size up to 30 x 30 cm	≥ 8.0	3.0÷3.5	from 3.0	from 4.5
large size up to 50 x 50 cm	≥ 10.0	4.0÷4.5	from 4.0	from 6.0



## Important additional information

- 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.
- Higher air humidity or low temperature extend the setting time of 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 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. Content of soluble chromium (VI) in ready-to-use mix -  $\leq 0.0002\%$ .

## Packaging

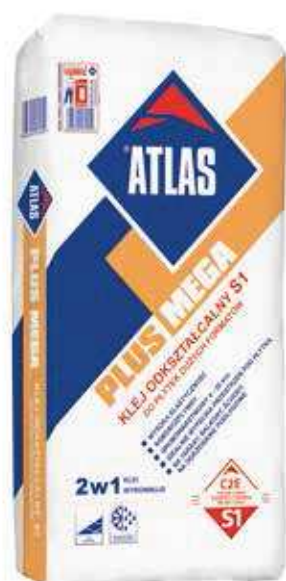
Foil bags: 25 kg

Pallet: : 1,050 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.*

*Date of update: 2016-03-31*



**C2ES1**  
PRODUCT CONFORMS  
TO THE EUROPEAN  
STANDARD



## ATLAS PLUS MEGA

### thick-coat deformable adhesive S1 4-20 mm

- for any type of ceramic, stone, glass cladding, composite panels
- for large size tiles (>1 m<sup>2</sup>)
- for difficult substrates: floor heating, terrazzo, OSB boards, old tiles, wooden floors, metal and plastic surfaces
- for thin- and thick-coat tiling
- for substrates requiring unevenness correction with full adhesive spreading beneath a tile
- on terraces, balconies, in pools and technological tanks
- for residential, commercial and service, public access and industrial buildings

### Polymer technology

The polymer technology is used in the ATLAS PLUS MEGA recipe. Owing to the high content of redispersible polymer resins, the cement adhesive gets unique properties and offers the highest technical and operation parameters assuring long term durability. The presence of polymers ensures high bonding of any cladding to any substrate type, including, so called, difficult and critical ones. Owing to the interchange of the polymer network with the network of inorganic hydration cement bindings, the adhesive offers outstanding parameters. In combination with specially selected aggregate the adhesive offers full spreading and filling the space beneath a tile – thixotropic effect. The content of white cement limits the risk of the discolouration of the cladding.

**The use of the polymer technology gives:**

- possibility of fixing the cladding of any type, both absorbable and non-absorbable – owing to high bonding resulting from high content of the polymer resin,
- possibility of fixing the tiles on, so called, difficult substrates, including heated screeds, wooden floors, OSB boards, terrazzo, old tiles (tile on tile) as well as substrates subject to large and very large mechanical and thermal load – owing to the deformability,
- outstanding plasticity and mass homogeneity – the adhesive is easily workable and spread upon the surface – the adhesion strength prevents the adhesive from “rolling back” onto the trowel and thixotropic properties make the tiles stably fixed and eliminate the phenomenon of the tile pulling during fixing as well as the adhesive setting and drying.

**Reinforcement with fibers**

- the structural reinforcement with cellulose fibers helps to compensate the stress occurring on deformable substrates.
- the fibers improve water retention of the adhesive: limit the effects of sudden water retention both within the joint with absorbable substrate and absorbable tile as well as within the evaporation zone. During the adhesive setting and drying (particularly when applied with maximum thickness) the fibers accumulate and transfer water keeping its uniform level within the whole coat.

### Properties

ATLAS PLUS MEGA is manufactured as a dry mix of high quality cement binder, aggregates and special composition of modifiers.

**Highly flexible** – deformability S1 – the permissible deflection of the set adhesive is within 2.5 – 5 mm range (test according to PN-EN 12002).

**With improved bonding** – the actual bonding to concrete substrate in standard conditions is two times higher than the one required by the PN-EN 12004 standard.

**2 in 1** – levels the substrate and fixes the tiles simultaneously – it's a thick-coat adhesive (coat thickness up to 2 cm), eliminates the need of leveling screed installation.

**Extended open time** – allows placing the tiles even 30 minutes since the mortar application – it can be once applied onto larger surface and therefore minimize the time of work.

**Fills full space beneath a tile** – eliminates air gaps, limits water accumulation outdoors (freezing water loosens the tiles), ensures appropriate thermal performance of heated floors (air gaps isolate the heat flow).

**Ensures full support of large size tiles** – eliminates the risk of cracking resulting from impact or stress.

**Slight slopes within the adhesive coat can be formed** – plastic consistency of the adhesive and wide range of thickness supported with the thixotropic properties enables slight slopes forming.

**Recommended for fixing floor tiles in any building type, wherever full filling the space beneath a tile is required. Does not cause the tile pulling phenomenon during the adhesive setting and drying.**

### Use

**Fixing ceramic and stone cladding of any type** – glazed tiles, terracotta, porcelain-gres tiles, clinker, stone, ceramic mosaic, concrete and cement tiles, marble/natural stone cladding insusceptible to discolouration, glass mosaic and tiles, laminated porcelain-gres tiles, composite panels, insulation and acoustic panels. If in doubt conduct an application test.

**Fixing small, medium and large size claddings** – small and medium size tiles (< 0.1 m<sup>2</sup>), large (< 0.25 m<sup>2</sup>) and very large size tiles (> 0.25 m<sup>2</sup>), slim-type tiles.

**Fixing cladding on horizontal surfaces, indoors and outdoors:**

- in residential, public access, healthcare, commercial and service, sacral, industrial buildings, warehouses, multi-storey garages, infrastructure,
- in kitchens, bathrooms, laundries, showers, washes, rooms washed with plenty of water, offices, garages, communication routes, on balconies, terraces, loggias,
- technological tanks, pools, fountains, jacuzzi, balneotechnology (with no aggressive chemicals in use), drinking water reservoirs, sauna, SPA,
- in rooms of small and medium operation load.

**Fixing cladding on standard substrates** – cement screeds and mortars, anhydrite screeds.

**Fixing cladding on deformable substrates or, so called, difficult substrates**

– concrete, terrazzo, elastic and rigid damp proofing (e.g. WODER S, WODER E, WODER W or WODER DUO), magnesium substrates, dry substrates made of gypsum boards, screeds (cement and anhydrite) with water and electric heating system or with heating mats embedded, existing ceramic and stone cladding (“tile on tile”), concrete resin lacquers bonded to the substrate, dispersion, oil paints bonded to the substrate, mineral, dispersion and reactive sealing coats, wooden floors (thick. >25 mm), OSB and chipboards (thick. >25 mm), insulation and acoustic panels, metal, steel and plastic surfaces, mastic asphalt screeds. If in doubt conduct an application test.

**Note.** Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.


## Technical data

Mass bulk density (after mixing)	approx. 1.65 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.21 – 0.24 l / 1 kg 5.25 – 6.00 l / 25 kg
Min./max. adhesive thickness	4 mm / 20 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	approx. 5 minutes
Pot life*	approx. 4 hours
Open time*	min. 30 minutes
Adjustability time*	approx. 10 minutes
Floor access/ grouting*	after approx. 24 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 C2E S1 class adhesive. EC Declaration of Performance No. 1024/CPR.

 2007, 0767	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Cement adhesive for tiles of enhanced parameters, extended open time, deformable C2E S1 type	for indoor and outdoor use, for walls and floors
Reaction to fire – class	A2-s1, d0 A1fl-s1
Bonding strength - initial bonding	≥ 1.0 N/mm <sup>2</sup>
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup>
Open time - tensile adhesion after time not shorter than 30 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
Transverse deformation	≥ 2.5 mm and < 5 mm
Release/content of hazardous substances	See: Safety Data Sheet

The product has been given the Hygienic Attest and 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 20 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 agent.
- **primed with:**
  - ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS – substrates of excessive or heterogeneous 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](http://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 flat steel trowel and then distributed evenly and shaped (possibly in one direction) using a notched trowel. It is advisable to spread a thin adhesive coat first and then apply the coat of desired thickness and shape it with a notched trowel. It is recommended to lead a notched trowel in one direction.

#### Installing 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. Remove the excess of the adhesive pressed into the joints immediately. 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 10 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. 24 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.

### Coverage

Average coverage: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	Full surface contact [kg/m <sup>2</sup> ]
small, medium and large size up to 50 x 50 cm	≥ 10.0	4.0÷4.5	from 6.0
large size from 50 x 50 cm	12	6.0÷7.0	from 9.0

## Important additional information

- 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.
- 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. Content of soluble chromium (VI) in ready-to-use mix -  $\leq 0.0002\%$ .

## Packaging

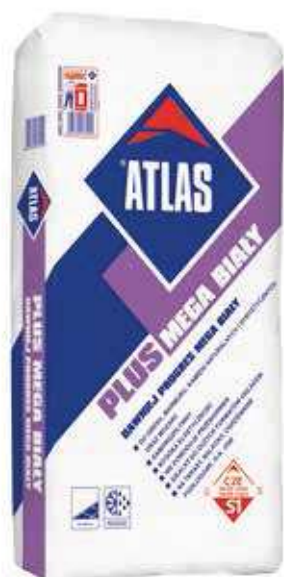
Foil bags: 25 kg

Pallet: : 1,050 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.*

*Date of update: 2016-03-31*



**C2ES1**  
PRODUCT CONFORMS  
TO THE EUROPEAN  
STANDARD



4-20 mm  
LAYER THICKNESS



## ATLAS PLUS MEGA WHITE

### white, thick-coat deformable adhesive

#### S1 4-20 mm

- for any type of ceramic, stone, glass cladding, composite panels
- for large size tiles (>1 m<sup>2</sup>)
- for difficult substrates: floor heating, terrazzo, OSB boards, old tiles, wooden floors, metal and plastic surfaces
- for thin- and thick-coat tiling
- for substrates requiring unevenness correction with full adhesive spreading beneath a tile
- on terraces, balconies, in pools and technological tanks
- for residential, commercial and service, public access and industrial buildings
- with white cement, which does not cause cladding discolouration, which can occur in contact with grey cement

### Polymer technology

The polymer technology is used in the ATLAS PLUS MEGA WHITE recipe. Owing to the high content of redispersible polymer resins, the cement adhesive gets unique properties and offers the highest technical and operation parameters assuring long term durability. The presence of polymers ensures high bonding of any cladding to any substrate type, including, so called, difficult and critical ones. Owing to the interchange of the polymer network with the network of inorganic hydration cement bindings, the adhesive offers outstanding parameters. In combination with specially selected aggregate the adhesive offers full spreading and filling the space beneath a tile – thixotropic effect. The content of white cement limits the risk of the discolouration of the cladding.

#### The use of the polymer technology gives:

- possibility of fixing the cladding of any type, both absorbable and non-absorbable – owing to high bonding resulting from high content of the polymer resin,
- possibility of fixing the tiles on, so called, difficult substrates, including heated screeds, wooden floors, OSB boards, terrazzo, old tiles (tile on tile) as well as substrates subject to large and very large mechanical and thermal load – owing to the deformability,
- outstanding plasticity and mass homogeneity – the adhesive is easily workable and spread upon the surface – the adhesion strength prevents the adhesive from “rolling back” onto the trowel and thixotropic properties make the tiles stably fixed and eliminate the phenomenon of the tile pulling during fixing as well as the adhesive setting and drying.

#### Reinforcement with fibers

- the structural reinforcement with cellulose fibers helps to compensate the stress occurring on deformable substrates.
- the fibers improve water retention of the adhesive: limit the effects of sudden water retention both within the joint with absorbable substrate and absorbable tile as well as within the evaporation zone. During the adhesive setting and drying (particularly when applied with maximum thickness) the fibers accumulate and transfer water keeping its uniform level within the whole coat.

### Properties

**ATLAS PLUS MEGA WHITE** is manufactured as a dry mix of high quality cement binder, aggregates and special composition of modifiers.

**Does not cause cladding discolouration** – perfect for fixing natural stone and tiles prone to discolouration – owing to high bonding and white cement.

**Highly flexible – deformability S1** – the permissible deflection of the set adhesive is within 2.5 – 5 mm range (test according to PN-EN 12002).

**With improved bonding** – the actual bonding to concrete substrate in standard conditions is two times higher than the one required by the PN-EN 12004 standard.

**2 in 1 – levels the substrate and fixes the tiles simultaneously** – it's a thick-coat adhesive (coat thickness up to 2 cm), eliminates the need of leveling screed installation.

**Extended open time** – allows placing the tiles even 30 minutes since the mortar application – it can be once applied onto larger surface and therefore minimize the time of work.

**Fills full space beneath a tile** – eliminates air gaps, limits water accumulation outdoors (freezing water loosens the tiles), ensures appropriate thermal performance of heated floors (air gaps isolate the heat flow).

**Ensures full support of large size tiles** – eliminates the risk of cracking resulting from impact or stress.

**Slight slopes within the adhesive coat can be formed** – plastic consistency of the adhesive and wide range of thickness supported with the thixotropic properties enables slight slopes forming.

**Recommended for fixing floor tiles in any building type, wherever full filling the space beneath a tile is required. Does not cause the tile pulling phenomenon during the adhesive setting and drying.**

### Use

**Fixing ceramic and stone cladding of any type** – glazed tiles, terracotta, porcelain-gres tiles, clinker, stone, ceramic mosaic, concrete and cement tiles, marble/natural stone cladding, glass mosaic and tiles, laminated porcelain-gres tiles, composite panels, insulation and acoustic panels. If in doubt conduct an application test.

**Fixing small, medium and large size claddings** – small and medium size tiles (< 0.1 m<sup>2</sup>), large (< 0.25 m<sup>2</sup>) and very large size tiles (> 0.25 m<sup>2</sup>), slim-type tiles.

#### Fixing cladding on horizontal surfaces, indoors and outdoors:

- in residential, public access, healthcare, commercial and service, sacral, industrial buildings, warehouses, multi-storey garages, infrastructure,
- in kitchens, bathrooms, laundries, showers, washes, rooms washed with plenty of water, offices, garages, communication routes, on balconies, terraces, loggias,
- technological tanks, pools, fountains, jacuzzi, balneotechnology (with no aggressive chemicals in use), drinking water reservoirs, sauna, SPA,
- in rooms of small and medium operation load.

**Fixing cladding on standard substrates** – cement screeds and mortars, anhydrite screeds.

#### Fixing cladding on deformable substrates or, so called, difficult substrates

– concrete, terrazzo, elastic and rigid damp proofing (e.g. WODER S, WODER E, WODER W or WODER DUO), magnesium substrates, dry substrates made of gypsum boards, screeds (cement and anhydrite) with water and electric heating system or with heating mats embedded, existing ceramic and stone cladding (“tile on tile”), concrete resin lacquers bonded to the substrate, dispersion, oil paints bonded to the substrate, mineral, dispersion and reactive sealing coats, wooden floors (thick. >25 mm), OSB and chipboards (thick. >25 mm), insulation and acoustic panels, metal, steel and plastic surfaces, mastic asphalt screeds. If in doubt conduct an application test.

**Note. Check the product sheet on [www.atlas.com.pl/en](http://www.atlas.com.pl/en) for more detailed info on the range of use.**




## Technical data

Mass bulk density (after mixing)	approx. 1.95 kg/dm <sup>3</sup>
Mixing ratio (water/dry mix)	0.21 – 0.24 l / 1 kg 5.25 – 6.00 l / 25 kg
Min./max. adhesive thickness	4 mm / 20 mm
Adhesive preparation temperature, substrate and ambient temperature during work	from +5°C to +25°C
Maturing time	approx. 5 minutes
Pot life*	approx. 4 hours
Open time*	min. 30 minutes
Adjustability time*	approx. 10 minutes
Floor access/ grouting*	after approx. 24 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 C2E S1 class adhesive. EC Declaration of Performance No. 089/CPR.

 2007, 0767	PN-EN 12004+A1:2012 (EN 12004:2007+A1:2012)
Cement adhesive for tiles of enhanced parameters, extended open time, deformable C2E S1 type	for indoor and outdoor use, for walls and floors
Reaction to fire – class	A2-s1, d0 A1fl-s1
Bonding strength - initial bonding	≥ 1.0 N/mm <sup>2</sup>
Durability - bonding after: - heat exposure - immersion in water - freeze-thaw cycles	≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup> ≥ 1.0 N/mm <sup>2</sup>
Open time - tensile adhesion after time not shorter than 30 minutes	≥ 0.5 N/mm <sup>2</sup>
Slip	≤ 0.5 mm
Transverse deformation	≥ 2.5 mm and < 5 mm
Release/content of hazardous substances	See: Safety Data Sheet

The product has been given the Hygienic Attest and 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 20 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 agent.
- **primed with:**
  - ATLAS UNI-GRUNT or ATLAS UNI-GRUNT PLUS – substrates of excessive or heterogeneous 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](http://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 flat steel trowel and then distributed evenly and shaped (possibly in one direction) using a notched trowel. It is advisable to spread a thin adhesive coat first and then apply the coat of desired thickness and shape it with a notched trowel. It is recommended to lead a notched trowel in one direction.

### Installing 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. Remove the excess of the adhesive pressed into the joints immediately. 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 10 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. 24 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.

### Coverage

Average coverage: approx. 1.5 kg of dry mix / 1 m<sup>2</sup> / 1 mm adhesive layer – for complete filling the space beneath the tile. It depends on the smoothness of the surface and the back side of the tile.

Tile size	Trowel notch size [mm]	Thickness of adhesive coat [mm]	Full surface contact [kg/m <sup>2</sup> ]
small, medium and large size up to 50 x 50 cm	≥ 10.0	4.0÷4.5	from 6.0
large size from 50 x 50 cm	12	6.0÷7.0	from 9.0

## Important additional information

- 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.
- 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. Content of soluble chromium (VI) in ready-to-use mix -  $\leq 0.0002\%$ .

## Packaging

Foil bags: 25 kg

Pallet: : 1,050 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.*

*Date of update: 2016-03-31*



[www.atlas.com.pl](http://www.atlas.com.pl)

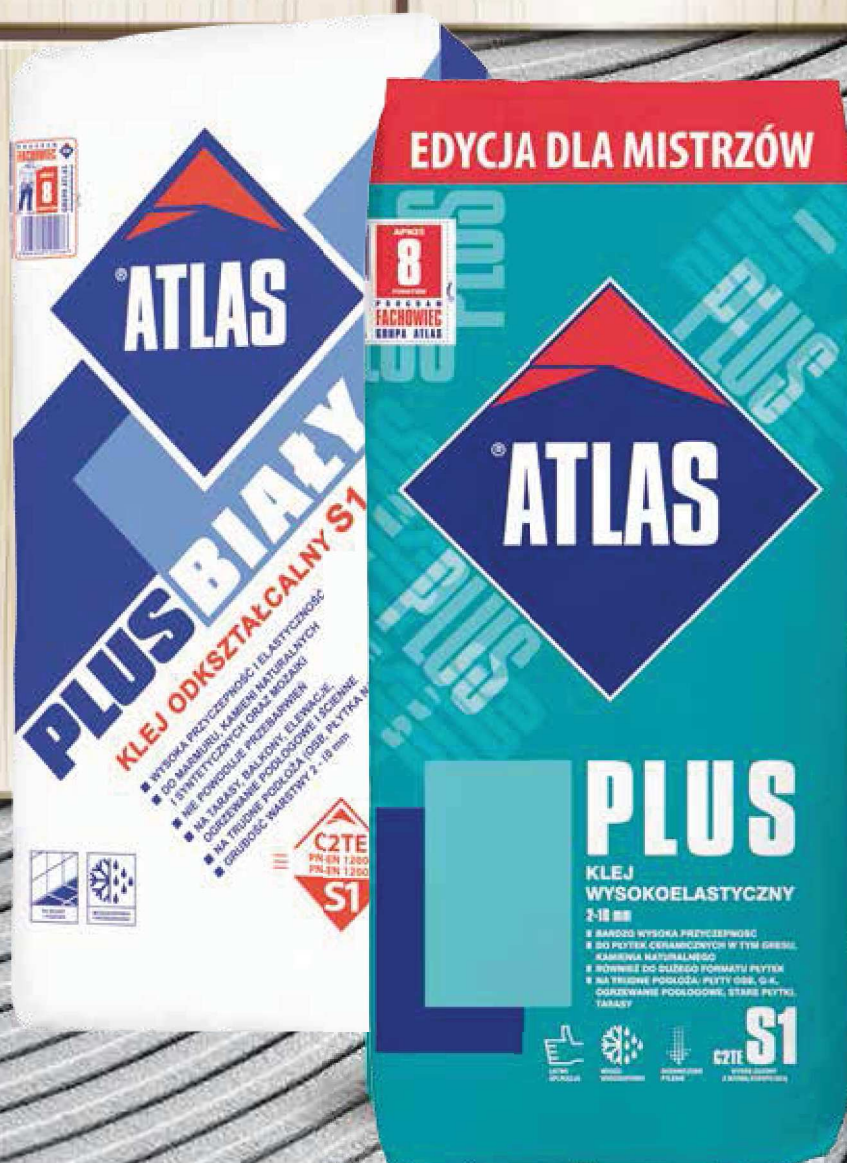
ATLAS PLUS is a flexible adhesive most popular for professionals. It is confirmed by millions of square meters of tiles laid on different substrates with the use of this adhesive. It is appreciated because of high bonding strength, flexibility as well as of firmness and reliability.

It meets the highest Polish and European standards.

Highly flexible adhesives ATLAS PLUS and ATLAS PLUS WHITE has S1 class of deformability that means resistance to deformation up to 5 mm. It allows to apply the adhesives on difficult substrates such as plasterboards, OSB, wooden ceilings. It ensures firm and lasting cladding in bathrooms, kitchens, on terraces, balconies, façades and even in home swimming-pools.

**ATLAS PLUS – FIRM, RELIABLE, FLEXIBLE!**

When the  
substrate  
works like  
this page ...



DEFORMABLE ADHESIVE