

## Properties

**ATLAS HOTER U** is produced as a dry mixture of the highest quality cement binder, aggregates and specially selected modifying agents.

**It has very high adhesion** - due to its increased polymer dispersion content, it exhibits high adhesion to mineral substrates and to EPS and XPS boards. This parameter is also favourably influenced by the varied, tight bulk density of the aggregate mixture. The mortar adheres strongly even to difficult substrates, e.g. paint-coated surfaces with good adhesion to the substrate.

**It has increased resistance to cracking** - thanks to the structural fibre reinforcement, the mortar has increased resistance to:

- formation of micro-scratches in the initial setting stage,
- the formation of cracks during the life of the system.

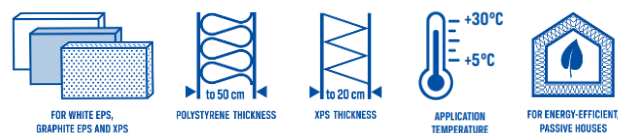
**It is vapour-permeable.**

**It is available in two versions: on white cement (ATLAS HOTER U WHITE) or on grey cement (ATLAS HOTER U)** - the use of white cement increases the strength of the adhesive layer.

# ATLAS HOTER U

## adhesive mortar for EPS and XPS and for mesh embedding

- high adhesion
- increased durability thanks to microfibres
- crack- and scratch-resistant
- for insulation with ceramic tiles up to 0.36 m<sup>2</sup>



## Purpose

**In ETICS systems** - for bonding thermal insulation boards made of EPS (white and graphite) and XPS boards and for making a reinforced layer on them,

**Allows the fixing of polystyrene boards up to 50 cm thick.**

**Allows XPS boards up to 20 cm thick to be fixed.**

**It is recommended for insulation work in passive and energy-saving construction and energy-efficient buildings.**

**It is a component of thermal insulation systems** - it can be used to insulate newly erected buildings and those undergoing thermal modernisation.

FUNCTION IN THE INSULATION SYSTEM	
fixing thermal insulation in thermal insulation systems	+
Reinforced layer in thermal insulation systems under all ATLAS thin layer plasters	+

TYPES OF THERMAL INSULATION PANELS	
EPS boards - white polystyrene	+
EPS boards - polystyrene graphite	+
XPS boards - extruded polystyrene	+
mineral wool boards with a structured fibre structure (lamella)	Use ATLAS ROKER System
mineral wool boards with unstructured fibre structure (façade)	Use ATLAS ROKER System

TYPES OF FACILITIES	
housing construction	+
public, educational, office, healthcare, sports facilities	+
commercial and service construction	+
industrial construction	+
industrial warehouses	+
traffic construction	+
farm and livestock buildings	+
underground garages	use ATLAS ROKER G SYSTEM
tall buildings > 25 m*	use the ATLAS ROKER SYSTEM
passive construction	+
energy-efficient construction	+

\* buildings up to 11 storeys put into service before 1.4.1995 may be insulated with EPS.

SUBSTRATE TYPE	
cellular concrete masonry	+
brick or silicate block masonry	+
brick or hollow brick masonry	+
concrete block wall	+
stone wall	+
site-made concrete walls	+
precast concrete walls	+
cement and cement-lime plasters	+
walls covered with highly adherent coatings of paint (each time requires an adhesion assessment)	+
ceilings on the side of ceilings, under heated rooms	use ATLAS ROKER G SYSTEM

TYPE OF INSULATION SYSTEM	
traditional system (finished with thin-coat plaster)	+
renovation system (insulation of existing thermal insulation with polystyrene foam)	+
ceramic system (finished with ceramic tiles)	+

## Technical data

Bulk density (dry mix)	approx. 1.40 kg/dm <sup>3</sup>
Mixing ratio water / dry mix	0.20÷0.22 l / 1 kg 5.00÷5.50 l / 25 kg
Min/max. thickness of reinforced layer	2 mm / 5 mm
Air-dry adhesion to concrete*	min. 0.25 MPa
Air-dry adhesion to polystyrene foam*	min. 0.08 MPa
Temperature of mortar preparation of the substrate and surroundings	from +5 °C to +30 °C
Maturation time	approx. 5 minutes
Standby time*	approx. 4 hours
Open operating time*	min. 25 minutes

\*) The values given in the table are recommended for application conditions of approx. 20 °C and 55 % humidity.

## Technical requirements

ATLAS HOTER U is a component of complex thermal insulation systems with plastering:

Name of the system	European Technical Assessment
ATLAS	ETA 06/0081
ATLAS XPS	ETA 07/0316

ATLAS HOTER U is a component of product kits for thermal insulation systems:

Name of the system	National Technical Assessment
ATLAS ETICS	ITB-KOT-2020/1616 Issue 3
ATLAS RENOTER	ITB-KOT-2021/2020 Issue 1
ATLAS CERAMIK	ITB-KOT-2018/0385 Issue 4
ATLAS ROKER EPS	ITB-KOT-2020/1188 Issue 1

## Bonding of thermal insulation

### Preparing the substrate for bonding the board

The substrate should be:

**unfrozen and dry,**

**stable** - sufficiently load-bearing, resistant to deformation and seasoned,

**even** - larger irregularities should be filled with mortar:

- ATLAS ZW 330,
- ATLAS PLASTERING MORTAR,

**cleaned** - from layers that could weaken the adhesion of the mortar, especially from dust, dirt, lime, oil, grease, wax, paint residues,

**primed** - with emulsion:

- ATLAS GRUNT NKP (ready to use - without dilution),
- ATLAS UNI-GRUNT,
- ATLAS UNI-GRUNT COLOUR,
- ATLAS UNI-GRUNT ULTRA,

Apply the primer to absorbent or unevenly absorbent substrates (e.g. in case of previous local repairs); weak cement and cement-lime plasters, as well as masonry made of cellular concrete, silicate blocks or cinder blocks also require priming.

The plinth trim, which is the lower finish of the insulation, must be fixed and levelled before the panels are adhered.

### Specific indications for substrate preparation, depending on the type of substrate

Substrate type	Procedure
"Dull" plasters	absolutely remove
Paint coatings with low adhesion and other impurities that impair mortar adhesion to the substrate	remove mechanically, e.g. by hydrodynamic washing
Facades with microbial infestation on the surface (fungi, algae, lichen)	clean the surface mechanically, then use ATLAS MYKOS NR 1 or ATLAS MYKOS PLUS
Buildings built in large-panel technology	In addition to assessing the condition of the substrate, the condition of the inter-plate joints should be checked. Putty from joints that may react chemically with the thermal insulation should be removed. In structures built with external pre-fabricated sandwich panels, a technical assessment of the original condition of the texture layer fixing should be carried out. If necessary, this joint should be reinforced by additional anchoring before the insulation work. The assessment and technical design in this respect should be carried out by a person with structural competence.

#### Preparation of the adhesive

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

#### Tile bonding

The adhesive mortar should be applied to the inside of the board using the "strip and point" method. The width of the perimeter prism, laid along the edge of the board, should be at least 3 cm. On the remaining surface, apply evenly 6-8 cakes with a diameter of min. 8 cm. In total, you should put enough mass to cover at least 40% of the whole panel surface (after pressing the panel to the base - at least 60%) to ensure that the panel is properly fixed to the wall. The adhesive mortar is only applied to the surface of the insulation boards, never to the substrate. It is recommended that the mortar thickness under the panel after pressing should not exceed 10 mm. With even and smooth substrates, it is permissible to spread the mortar evenly with a notched trowel over the entire surface of the board. The size of the trowel teeth should be no less than 10 x 10 mm.

Adhere the insulation boards in a staggered pattern of vertical joints. Immediately after the adhesive mortar has been applied, apply the boards to the substrate and then tap them into position using a patch. Fastening with mechanical fasteners may be commenced at the earliest one day after the boards have been fixed. For additional fixing, plastic or steel studs should be used in accordance with the thermal insulation design, min. 4 pcs/m<sup>2</sup>.

#### Reinforced layer

##### Preparation of slabs for reinforced layer

The surface of the panels should be frost-free, even, clean, stable and dust-free before the reinforcement layer is applied to them. The surface should be sanded and dusted off before a reinforced layer is applied to graphite panels.

##### Making a reinforced layer.

The reinforced layer can be applied no earlier than three days after the panels have been adhered. The reinforced layer consists of a reinforcing mesh made of glass fibre embedded in adhesive mortar. The reinforced layer is made by applying the mortar evenly with a trowel (e.g. a toothed trowel with 6-10 mm tooth size) and then spreading the reinforcing mesh and sinking it with the trowel, while filling it in smoothly. It is important that the reinforcing mesh is invisible and completely embedded in the adhesive. It is important that the mesh is invisible and completely embedded in the adhesive. 10 cm.

Any remaining irregularities after the mortar has dried must be sanded down, as they may prevent the plaster from being applied correctly.

To avoid scratches at the corners of the openings, additional mesh strips of at least 20 x 35 cm should be adhered in at an angle of 45 degrees. 20 x 35 cm. The reinforcements should be placed under the actual reinforced layer.

##### Finishing work

The plastering can be started after the mortar has dried out (about 3 days) and when weather conditions comply with the requirements indicated in the plastering technical sheets. Before plastering, the reinforced layer should be covered with a primer appropriate for the selected plaster.

#### Consumption

The exact consumption of the material depends on the parameters of the substrate (e.g. the degree of evenness) and the tile bonding technology adopted.

Board bonding: 4.0 to 5.0 kg/m<sup>2</sup>.

Reinforced layer: 3.0 to 3.5 kg/m<sup>2</sup>.

#### Packaging

25 kg paper bags.

## Safety information

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Safety information is given on the product packaging and in the Safety Data Sheet, available at [www.atlas.com.pl](http://www.atlas.com.pl).

## Storage and transport

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Information on storage and transport is given on the product packaging and in the Safety Data Sheet, available at [www.atlas.com.pl](http://www.atlas.com.pl).

The shelf life of the product (best before use) is 12 months from the date of manufacture on the packaging.

## Important additional information

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Do not adhere heated graphite polystyrene. Do not allow graphite polystyrene to become hot during installation or during the initial setting of the adhesive. If the graphite polystyrene foam is heated at any of these stages, it may result in the polystyrene foam becoming detached from the adhesive.

It is necessary to use covers on scaffolding during the works. Work must not be carried out during snow or rainfall or in strong winds.

If it is necessary to adhere Styrofoam panels on weak substrates with a bearing capacity that is difficult to determine (e.g. unstable, dusty, difficult to clean), it is recommended to carry out an adhesion test. It consists in adhering polystyrene cubes of 10x10x10 cm in characteristic (important, representative) areas of the façade and checking the joint:

- after 3 days under normal conditions,
- after 5 days when the temperature is below 10 °C and the humidity is above 80 %.

The strength of the substrate can be considered sufficient if the polystyrene foam is torn off during detachment by hand. If the cube is torn off together with the mortar and substrate layer then the substrate is not sufficiently load-bearing. Further treatment in such a case, e.g. determining how to remove the weak layer, should be described in the technical design of the insulation.

Clean the tools with clean water, directly after use. Difficult to remove residues of already set mortar are washed off with ATLAS CEMENT AWAY.

The information contained in this Technical Data Sheet is a basic guideline for the use of the product and does not relieve the user of the obligation to carry out the work in accordance with the rules of the art of construction and safety regulations. With the issue of this Technical Data Sheet, all previous ones are no longer valid. The documents accompanying the product are available at [www.atlas.com.pl](http://www.atlas.com.pl).

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**Update date: 2023-03-29**