



# ATLAS GRAWIS ULTRA

## adhesive compound for reinforced layers

- allows for the creation of facades in intense, dark or extremely dark colours
- ready to use
- no priming required – primer-free
- highly flexible, fibre-reinforced
- resistant to extreme thermal stresses and mechanical loads
- for facades with extremely varied colours, when combining different types of render finishes
- for facade sections exposed to mechanical damage
- for repairing damaged thermal insulation systems



### NO LIMIT COLOUR DEDICATED

Contains polymer binders that ensure greater deformability without cracking, even when the surface is heated to high temperatures (+80 °C). The reinforced layer made with ATLAS GRAWIS ULTRA guarantees the possibility of using very dark colours of ATLAS GEMINI RSX render, as well as creating colour combinations between colours of extremely different shades, e.g. combining black and white render.

**It allows for the creation of facades in intense, dark or extremely dark colours** – in combination with ATLAS GEMINI RSX render, which offers 499 SAH colours, including a wide range of safe colours.

**High elasticity** – no cracks in the façade even at HBW=5.

The use of ATLAS thin-coat renders in combination with various types of adhesive mortars depending on the colour scheme of the façade (HBW)\*

|                                              |                                                |
|----------------------------------------------|------------------------------------------------|
| RENDER<br>ATLAS GEMINI RSX<br>ATLAS DEKO M** | HBW <10                                        |
|                                              | ATLAS GRAWIS ULTRA                             |
|                                              | HBW >10                                        |
| Any ATLAS thin-coat render                   | ATLAS GRAWIS ULTRA                             |
|                                              | ATLAS STOPTER K-50                             |
|                                              | ATLAS STOPTER K-20                             |
|                                              | HBW >15                                        |
|                                              | ATLAS GRAWIS ULTRA                             |
|                                              | ATLAS STOPTER K-50                             |
|                                              | ATLAS STOPTER K-20                             |
|                                              | ATLAS HOTER U-2B                               |
|                                              | ATLAS GRAWIS U, ATLAS GRAWIS DUO + double mesh |
|                                              | ATLAS GRAWIS DUO WHITE                         |
|                                              | HBW >20                                        |
|                                              | Any ATLAS adhesive for the reinforced layer    |

\* HBW – light reflectance coefficient, expressed as a percentage. It determines what percentage of sunlight is reflected from the façade surface. The lower the HBW coefficient, the more radiation is absorbed by the façade surfaces, increasing the temperature on that surface. Light colours have a high HBW coefficient (equal to 100 for white). The darker and more intense the colours, the lower the light reflectance coefficient.

\*\* When using dark-coloured mosaic renders on façade surfaces exceeding 10% of the total area, it is recommended to contact the Product Development Department (drp@atlas.com.pl) individually.

### ULTRA HIT PROTECT

**ATLAS GRAWIS ULTRA**, thanks to the use of binders with high deformability and mechanical strength, allows for the creation of exceptionally durable reinforced layers in thermal insulation systems. They can achieve an impact strength of up to 140 J (in combination with ATLAS GEMINI RSX render and a combination of 150 and 340 g/m<sup>2</sup> meshes). This load corresponds to the impact of a football travelling at a speed of 25 m/s (90 km/h).

**Hail resistance** - over 100 km/h with hailstones 5 cm in size.

### ULTRA EASY

**Easy application.**

**Ready to use** – speeds up work and eliminates problems characteristic of cement mortars resulting from inaccurate measurement of mixing water,

**No primer required** – additionally speeds up and facilitates work by eliminating the need for priming under the render coat.

## ULTRA HEAT PROTECT

**High durability during use** – through the use of a combination of plastic dispersions, special additives and modifiers, the durability of the reinforcing layer and resistance to weather conditions have been increased.

In combination with ATLAS GEMINI RSX, it enables the transfer of high mechanical and thermal stresses occurring in dark colours and at the border between light and dark colours.

**High resistance to micro-cracks** – achieved thanks to a specially selected blend of fine fillers and additional structural reinforcement using a special combination of different types and lengths of microfibrils.

**Very high adhesion to substrates** – thanks to its high polymer dispersion content, it exhibits higher than standard adhesion to concrete and very high adhesion to EPS and XPS boards. The compound adheres strongly to difficult substrates, e.g. surfaces covered with strongly adhering paint coatings.

### Properties

**ATLAS GRAWIS ULTRA** is a mixture of polymer resins, water-repellent additives, a combination of various types of fibres, modifiers and fillers.

**High elasticity** – ability to deform, compensate for stresses and bridge cracks (up to 2 mm) and impact shocks ensured by:

- very high content of dedicated polymer resins,
- 3D reinforcement using a mixture of fibres.

**Surface hydrophobisation** – allows the application of a top coat of render without the need for priming, which speeds up the installation of the ETICS system on the building facade.

The adhesive can be applied manually or by machine.

## Intended use

**ATLAS GRAWIS ULTRA is recommended for use on facades potentially exposed to mechanical damage** – buildings located near sports fields and playgrounds, facades in the immediate vicinity of pedestrian traffic, buildings in dense urban areas, building plinths, entrances to stairwells, etc.

**ATLAS GRAWIS ULTRA is recommended in places where there are intense, dark colours with HBW < 20, occupying more than 10% of the entire façade area** - it expands the possibilities of freely designing the colour scheme of façades, e.g. it allows the required HBW coefficient to be reduced to as low as 5%.

**It can be used to create a reinforced layer on façades when combining:**

- light and very dark colours,
- various types of render coatings (thin-coat renders; mosaic renders, renders with architectural concrete texture, boards, bricks, etc.)

**ATLAS GRAWIS ULTRA is part of the thermal insulation system and is used for:**

- creating a reinforced layer on EPS polystyrene (white and graphite) and XPS thermal insulation boards,
- creating a reinforced layer for silicone and silicone-silicate renders,

**Recommended for insulation work in traditional, energy-efficient and passive construction.**

**For repairing reinforced layers of damaged thermal insulation systems.**

|                                                                                                                                                         |                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Volume density                                                                                                                                          | approx. 1.7 g/cm <sup>3</sup>                                                                                         |
| Min/max. thickness of reinforced layer                                                                                                                  | 2 mm / 5 mm                                                                                                           |
| Application temperature (substrate and ambient)                                                                                                         | from +5 °C to +30 °C<br>Note: In the temperature range from +5 °C to +10 °C, the adhesive setting time may be longer. |
| Adhesion to polystyrene                                                                                                                                 | ≥ 0.08 MPa                                                                                                            |
| Water absorption of the insulation system (reinforced layer) <ul style="list-style-type: none"> <li>• after 1 hour</li> <li>• after 24 hours</li> </ul> | <br>< 150 g/m <sup>2</sup><br>< 500 g/m <sup>2</sup>                                                                  |
| Impact resistance of the insulation system (the reinforced system is a combination of ATLAS 150 mesh and SSA-1111-340-SM)                               | 140 J - with ATLAS GEMINI RSX<br>120 J - with ATLAS GEMINI R/RS<br>120 J – with ATLAS SILICONE-SILICATE RENDER        |
| Crack bridging                                                                                                                                          | up to 2 mm                                                                                                            |

\*) - applies to T=20° C. relative humidity 60%

## Technical requirements

**ATLAS GRAWIS ULTRA** is a component of a set of products for insulating external walls of buildings using the following system:

| System name | National Technical Assessment Number |
|-------------|--------------------------------------|
| ATLAS ETICS | ITR-KOT-2020/1616 edition 4          |

### Application of the reinforced layer

### Substrate preparation

The reinforced layer can be applied after the adhesive mortar used to bond the polystyrene boards has set properly and after any additional mechanical fastening has been carried out (on average after 3 days, or after 24 hours when using ATLAS GRAWIS U).

### Preparation of the adhesive

The surface of the product is covered with a layer of protective liquid, which is designed to prevent the product from drying out during long-term storage. The product should be mixed before use. If necessary, a maximum of 1% water by weight can be added to the adhesive.

If necessary, the compound may be coloured with SAH pigment pastes in an amount not exceeding 1% by weight. When using pigment pastes, the compound should not be diluted with additional water.

### Adhesive application

The adhesive can be applied manually or by machine – we recommend using a Graco Textspray RTX 5500 PX unit with an 8 mm round nozzle and a feed rate of 6/6. For machine application, add 2% water.

The adhesive compound should be spread over the levelled surface of the bonded thermal insulation, spread with a 6-8 mm notched trowel and immediately embedded with fibreglass reinforcement mesh. It is recommended to embed the mesh in vertical strips and smooth it out so that it is completely invisible and does not come into direct contact with the polystyrene boards.

When insulating with two meshes, e.g. 2 x ATLAS 150 or a combination of ATLAS 150 mesh with additional SSA-1111-340-SM armoured mesh, the work should be carried out in one of the ways described below.

#### Method 1 – one technological step – the "wet on wet" method.

Apply the adhesive compound to the surface of the previously bonded thermal insulation – rub it into the substrate and spread it with an 8-10 mm notched trowel. Then immediately embed the reinforcing mesh - SSA-1111-340-SM armoured mesh or standard ATLAS 150 mesh. The ATLAS 150 mesh should be laid in vertical strips, with overlaps of at least 10 cm, and the SSA-1111-340-SM armoured mesh should be adhered "end to end" without overlaps. Then press it down with a notched trowel, carefully squeezing out any excess compound onto the surface. Immediately apply the second layer of mesh – ATLAS 150 – with an offset of approximately half the width of the mesh in relation to the previous strips. It should be laid with overlaps of at least 10 cm. Squeeze the compound onto the top using a notched trowel, then smooth it out so that the mesh is invisible and completely covered with a layer of compound approximately 1 mm thick.

#### Method II – two technological steps – the "step-by-step" method.

Apply the adhesive compound to the surface of the previously bonded thermal insulation – rub it into the substrate and spread it with an 8-10 mm notched trowel. Then immediately embed the reinforcing mesh – armoured SSA-1111-340-SM or standard ATLAS 150. The armoured mesh should be laid in vertical strips, butt-jointed, without overlaps. Then press it down with a notched trowel and collect the compound to the thickness of the mesh (the mesh must be visible).

After the first layer of compound with the embedded mesh\* has set, apply the second layer with another mesh. Rub a thin layer of adhesive compound into the substrate. Then spread it with a 6-8 mm notched trowel and immediately embed the reinforcement mesh in it - offset from the previous strips by about half the width of the mesh, using overlaps of at least 10 cm. The compound should be squeezed out onto the surface with a notched trowel and then smoothed out so that the mesh is invisible and completely covered with a compound approximately 1 mm thick.

\*) The setting time of cementitious adhesive mortars (e.g. ATLAS GRAWIS, ATLAS HOTER, ATLAS STOPTER K-20, ATLAS STOPTER K-50) at a temperature of 20°C and humidity of 55% is approx. 12 hours, while the setting time of **ATLAS GRAWIS ULTRA** is approx. 24 hours. At lower temperatures, e.g. 5°C and 55% humidity for cementitious mortars, this time may be extended to approx. 48 hours, while at 10°C and 55% humidity for ATLAS GRAWIS ULTRA to approx. 24 hours.

### Remarks:

- diagonal mesh should be adhered into the corners of window and door openings and door openings first, before gluing corner strips.
- when pasting diagonal meshes, corner strips, eaves strips and windowsill strips, collect the adhesive compound on the surface of the reinforcing mesh so that it is visible,
- proceed with laying the reinforced layer only after the compound on which the above accessories were adhered has set,
- flashings and windowsills should not be embedded in the thermal insulation layer. They should be embedded in the reveal, ensuring freedom from thermal deformation (use PVC plugs).

### Finishing works

Rendering can be started after the reinforced layer has dried (approx. 3 days) and when the weather conditions meet the requirements specified in the Technical Data Sheets for thin-coat renders.

## Consumption

Average consumption:

- 3.0 to 4.0 kg/m<sup>2</sup> - reinforced layer with a single layer of mesh,
- 5.0 to 5.5 kg/m<sup>2</sup> - reinforced layer with a double layer of mesh.

## Packaging

25 kg plastic buckets

## Safety information

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

## Storage and transport

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

The product's storage period (shelf life) is 24 months from the date of manufacture indicated on the packaging.

## **Important additional information**

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The mortar's parameters are fully utilised when used in conjunction with other system components and in accordance with the technology of its application.

During the works, it is necessary to use covers on scaffolding. Do not carry out works during snowfall or rainfall, in strong winds or in direct sunlight on the façade.

Tools should be cleaned with clean water immediately after use. Residues of hardened mortar that are difficult to remove can be washed off with ATLAS SZOP 2000.

The information contained in the Technical Data Sheet constitutes basic guidelines for the use of the product and does not exempt from the obligation to perform work in accordance with the rules of good building practice and health and safety regulations. With the publication of this technical data sheet, all previous ones become invalid. Documents accompanying the product are available at [www.atlas.com.pl](http://www.atlas.com.pl).

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