



## MANUAL: ATLAS RENDER ONLY finishing

on a substrate made of:  
Fibre Cement Board (FCB),

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RENDER COMPONENTS' PROVIDER / MANUFACTURER:	ATLAS sp. z o.o. Kilińskiego 2 91-421 Łódź, Poland
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### DESCRIPTION

This manual applies to façade render: ATLAS SILICONE (ATLAS ACRYLIC RENDER or ATLAS SILICONE HYBRID RENDER) which requires the use of the following components:

- Primer on cement-fibre boards sheathing
- Base layer reinforced with fiberglass mesh made of adhesive mortar
- Reinforcing glass-fibre mesh
- Bonding primer for top-coat layer
- Top layer of thin-layer render

### NOTICE:

this solution does not include the use of thermal insulation, only covering CP board with a layer of facade render.

### Layers of the façade render coat:

		Thickness	Avg. consumption	Packaging	yield / from the package
PRIMER	ATLAS CERPLAST		~ 0,3 kg/m <sup>2</sup>	Bucket 15 kg	~ 50 m <sup>2</sup>
BASE COAT: REINFORCED LAYER	ATLAS ROKER U (*)	Up to 5 mm	up to 6,5 kg/m <sup>2</sup>	Paper bags 25 kg	≥ 3,85 m <sup>2</sup>
FIBERGLASS MESH	ATLAS 150	Embedded in adhesive layer	1,1 m/m <sup>2</sup>	Roll 50 m	45 m <sup>2</sup>
PRIMER	ATLAS SILKON ANX (**)		~ 0,3 kg/m <sup>2</sup>	Bucket 15 kg	~ 50 m <sup>2</sup>
RENDER	ATLAS SILICONE RENDER	≤ 2 mm	~ 2,5 kg/m <sup>2</sup>	Bucket 25 kg	~ 10 m <sup>2</sup>

(\*) ATLAS HOTER U or ATLAS STOFTER K-20 can be used alternatively

(\*\*) ATLAS CERPLAST can be used alternatively





## SUBSTRATE

The direct substrate for the ATLAS render finishing may be a sheathing of the structure made of fibre-cement boards intended for this purpose, the parameters of which enable the transfer of the loads to structural elements and having documentation confirming their properties appropriate for such usage. The sheathing must be properly mounted on the structure with the use of suitably selected fasteners, the number and spacing of which will ensure the necessary load-bearing capacity and stability. These parameters and the geometric arrangement of the substructure must provide support for the sheathing in accordance with the documentation of the panel manufacturer. The sheathing must be made in accordance with the manufacturer's recommendations. The substrate must be prepared in accordance with the recommendations of ATLAS Technical Data Sheets: it must be not frozen & has to be dry, stable, even, cleaned and free of dust, primed with ATLAS CERPLAST.

### 1. SUBSTRATE CONDITIONS/SUBSTRATE PREPARATION

CP boards can be used as a substrate for finishing with ATLAS thin-coat render (silicone, acrylic, hybrid or mosaic) provided that they meet the same conditions as for substrates for EWI systems.

#### a. STABILITY AND LOAD-BEARING

CP boards features must meet the load-bearing requirements resulting from the relevant standards and regulations regarding dimensions - including the minimum thickness. They must be mounted on the substructure in a way that ensures adequate transfer of the expected loads, in particular from wind (pressure and suction) and stresses resulting from temperature changes. The conditions for installation on the structure concern the spacing of posts required by the regulations and boards manufacturer, the density and mutual location of connectors (screws or rivets). The fasteners used, in addition to physical parameters such as length and screw diameters, must be made of stainless steel (or galvanized). The arrangement of the panels on the wall must ensure that they do not move relative to each other during period of use, which could result in scratches on the facade surface. If there are any expansion joints on the wall surface that may be responsible for transferring structure deformations, they should be transferred to the render finishing using dedicated profiles. If there are gaps left between the boards, they should be filled with a dedicated material, approved by the CP board manufacturer.

#### b. CLEAN / DEDUSTED

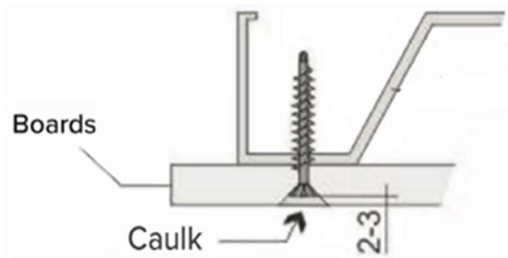
The surface of the boards must be clean and free from dust and dirt. Control of the new boards does not require special treatments - just manual verification. If the plates are dirty and dusty, they should be vacuumed.

In the case of existing sheathing required renewal by covering with new render should be clean thoroughly. There should be no flaky coatings on the surface, which has to be removed if necessary - preferably by using a pressure washer. These works should be carried out carefully, the washer nozzle should be set at an acute angle to the surface, the distance should be controlled. Remember to leave the surface to dry thoroughly - bearing in mind the information contained in point d.

#### c. FLATNESS

The surface of the wall covered with CP boards must be one plane. You should ensure it at the assembly stage of CPB sheathing. Installation of connectors (screws, rivets) may require drilling the appropriate holes so that their heads do not protrude above the surface.





Proper fixing of connectors (screws) - the heads cannot protrude above the surface of the boards.

#### d. DRY

Depending on the manufacturer and the type of CP board - they are more or less sensitive to moisture and exposed to atmospheric rainfall (left without proper protection) can get damp. Do not use damp boards with any Atlas product. Priming damp boards and the application of layers of rendering is not allowed in such conditions. CP boards sheathing must be left to dry - at least 72 hours from precipitation in dry weather condition. The humidity in the mass of the CP board should not exceed 3%. It should be borne in mind that the structure of the partition - the wall, the outer layer of which are CP boards - has to be protected against moisture from inside the building. To assure this, vapour barrier foil should be installed from internal side of the partition.

#### E. ADHESION

Make sure that adequate adhesion to CP boards constituting the substrate is ensured. In order to unify absorbency, it is recommended to use the ATLAS UNI-GRUNT, and if adhesion is questionable, we can use ATLAS CERPLAST primer. In particular cases - when pressed CP boards have a very smooth surface, or in the production process it was specially hardened with the use of hydrophobic agents, ATLAS ULTRAGRUNT primer must be used.

If renovation of the existing board sheathing is intended, especially the old ones, the adhesion verification should be performed: the PUL-OFF test, the same as in the case of a substrate intended for the installation of the EWI system. For this purpose, cubes cut from polystyrene boards should be used (tensile strength  $\geq 100\text{kPa}$ ); dimensions of cubes 10cm x 10cm x 10cm. Adhere them in several places - on each of the walls using adhesive mortar - the same that is designed to use as a material to make the main-coat layer of the render.

Adhesive mortar, prepared in accordance with system recommendations should be spread over the entire surface of the sample, to a thickness of approximately 10 mm. Then the sample is pressed to the substrate so as to obtain tight adhesion of the adhesive to the substrate over the entire surface of the sample.

Adhesion is checked after 3 days, if the day and night temperature was not lower than 10°C,

or after 5 days, when it was not lower than 5°C - by trying to manually tear off the stuck sample.

If the daily temperature drops below 5°C, tests should be performed 7-10 days after adhering the samples.

The force should be applied perpendicular to the bonding surface.

The result is acceptable only if the polystyrene cube breaks. If the failure occurs on the border of the adhesive and CP board, it means that the adhesion is insufficient (then primer has to be used). If during the test CP board is broken, it means the CP board does not have sufficient load capacity and is not suitable as a substrate for ATLAS render finishing.





## 2. RENDERING

### a. BASE-COAT LAYER - REINFORCED WITH FIBERGLASS MESH

Making the base-coat layer is aimed at unifying the surface and covering the joints between the plates, which during exploitation will not show a tendency to increase. One should remember that this layer will not be an effective protection of these places if they are liable to deform. The main layer should be made similarly as in EWI systems.

The correct way to apply the reinforced layer is to follow the next steps:

- apply a thin and even contact layer of the adhesive mortar on the prepared surface of the CP Board with the smooth side of steel trowel.
- using a notched trowel (8-10mm) apply a layer of adhesive mortar and embed reinforcing mesh into this layer, pressing it evenly with the notched side of the trowel. The mesh should be in the middle of the thickness of the adhesive mortar layer.
- level and smooth the surface of the reinforced layer with the smooth side of the trowel.

This stage should be started with the installation of corner, window and expansion profiles, etc. Then, in order to avoid scratches in the corners, additional strips of mesh with dimensions of min. 20 x 35 cm at an angle of 45 degrees should be pasted. The subsequent strips of mesh should overlap by a minimum of 10 cm, and 15 cm on corners. The mesh strips should also overlap with the mesh of the finishing profiles. The overlaps should not coincide with the joints between adjacent boards.

A correctly embedded mesh should be completely invisible under the coat of adhesive and it should not be in direct contact with the render.

Any uneven spots should be removed. Grind any irregularities as they can prevent correct application of renders since it is relatively thin, and should be uniform on the whole surface of the facade.

Further works can commence when the mortar is dry (after approx. 3 days) and when the weather conditions meet the requirements specified in the technical data sheets for the thin-layer renders.

### b. BONDING PRIMER FOR TOP-COAT LAYER:

Use ATLAS CERPLAST or ATLAS SILKON ANX primer adapted to the selected type of thin-layer render for the facade finish. Recommendations for priming can be found in the Product Data Sheets of the respective renders.

Leave the primed surface to dry for 4-6 hours

### c. TOP LAYER: THIN-COAT RENDER

Mass application: Apply the rendering mass with a smooth stainless steel float, with coat of thickness equal to the aggregate grain size. Collect excessive material, put it back in the bucket and remix.

Texture forming: Freshly applied mass requires texture forming with a plastic float, with circular moves. Excess "milk" that collects on the surface of the trowel should be thrown away.

Renders of aggregate 1.5 mm thick can be applied mechanically – the following units recommended:

- WAGNER PC 830e with nozzle 6 mm, operational pressure 1 bar,
- MAI 2MULTIPUMP with nozzle 6 mm, operational pressure 1 bar,
- GRACO Textspray RTX 1500 with nozzle 6 mm.

Machine-applied renders are not textured.





## GENERAL INFORMATION

- Render must not be applied to horizontal or sloping surfaces. Rendering should not be continued over movement joints, dampproof courses, weep holes or air vents.
- An adequate flashing must always be provided to prevent water penetrating behind the render.
- Suitably designed overhangs and flashings should be provided to prevent water washing onto the façade. A generous overhang or eave should be designed, and all sills and copings should have sufficient drips, including mortar joints at coping. Gutters and down-pipes must also be designed to keep water off the façade; temporary guttering and down-pipes may be required to help keep the surface as dry as possible.
- In order to minimise damage to the rendering, consideration should be given to installing fixings for rainwater, soil and vent pipes before rendering commences. The pipes themselves should be fitted after rendering is completed. Fixings should be made of stainless steel to minimise the risk of corrosion.

Protect the rendered surface during work and when it dries from direct sunlight, wind and precipitation. Drying time depends on the render type, substrate, temperature and relative humidity of air. In case of increased humidity and temperature ca.+5°C, render setting time may extend. Use the scaffolding net covers obligatorily during the render application and drying (for at least 3 days in temperature of +20°C and relative air humidity of 60%). The distance between the wall surface and the scaffolding cannot make the floating of the render difficult.

## BASE COAT

Use ATLAS mortars listed in the table. The choice depends on the expected parameters indicated in the Technical Data Sheets of ATLAS products. All necessary product documents can be found on the site: <https://www.atlas.com.pl/en/products/external-wall-insulation-672/adhesives-for-thermal-insulation-base-coat-693/>

## REINFORCING MESH

It is recommended to use

ATLAS 150	150 g/m <sup>2</sup>	mesh size 4,5 x 5,0 mm
or ATLAS 165	160 g/m <sup>2</sup>	mesh size 3,7 x 3,9 mm

alternatively:

R 117 A 101 / AKE 145 / VERTEX 145	145 g/m <sup>2</sup>	mesh size 4,0 x 4,5 mm
SSA 1363 SM(100)	145 g/m <sup>2</sup>	mesh size 3,5 x 3,5 mm
SSA 1363-150 SM 0.5	150 g/m <sup>2</sup>	mesh size 3,6 x 4,3 mm

- alkali resistant
- residual resistance after ageing  $\geq 20$  N/mm

## BEADS / TRIMS / ACCESSORIES

In order to ensure proper operation of the system, the necessary accessories should be used, i.e. starting profiles, corner profiles, eaves profiles, window profiles and expansion joints in places where they are required. It is necessary to take into account the correct order of assembly of profiles and reinforcing mesh.

<https://www.atlas.com.pl/en/product/facade-profiles-for-external-wall-insulation-697-2341/>





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## FLASHING / SEALING

In order to ensure that the system achieves the expected parameters, the works performed must be protected against water. For this purpose, tightness should be ensured by installing appropriate flashings and seals in places exposed to water penetration - including passages of all installations.

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## GENERAL NOTICE

- Façade render's components should be installed by certified contractors with the necessary knowledge and skills
- Compliance with work safety regulations is absolutely required
- Works should be carried out in the conditions specified in the Technical Data Sheets of individual system components, protecting against adverse weather conditions
- The inter-operational technological breaks required by ATLAS should be maintained, enabling the materials to achieve the expected physical parameters,
- During the application of system components, the contractor must follow the ATLAS guidelines contained in the technical data sheets of individual products. Information about the conditions and method of use can be found on the packaging and on the website [www.atlas.com.pl/en/](http://www.atlas.com.pl/en/)

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## FACILITY DIRT-PROTECTION and FINAL CLEANING

Before starting work, all exposed elements of property should be protected by masking tape and polyethylene film against splashing during plastering. After completion of work remove the protection, clean all marks, blemishes and splashes and all traces of plaster and mastic from windows, door frames, window sills and other affected surfaces. Leave the work completed and to the satisfaction of the Architect. At each stage of work, wipe clean all unprotected nosings, expansion joints, thresholds, etc.

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## MAINTENANCE

Current maintenance of the finishing layer is essential to proper durability of façade render. As ease of maintenance the following actions are provided repairs of damaged elements and, if necessary, application of new products or paints, consistent with system elements already used. Guidance can be found in **ATLAS Façade Maintenance and Renovation** guide available on ATLAS website: [www.atlas.com.pl/en/](http://www.atlas.com.pl/en/).

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The above information constitutes basic guidelines concerning the use of the products and does not release from the obligation to conduct work according to the best construction practices and health and safety at work regulations. The accompanying documents for the product are available at [www.atlas.com.pl/](http://www.atlas.com.pl/).

The content of the Technical Data Sheets as well as the symbols and trade names used in it are the property of Atlas sp. z o. o. Their unauthorized use will be sanctioned.

ATLAS warrants that render is fit for its intended use, provided that it is installed, used and maintained in accordance with the manufacturer's instructions found in the technical data sheets of the individual components and this manual.

