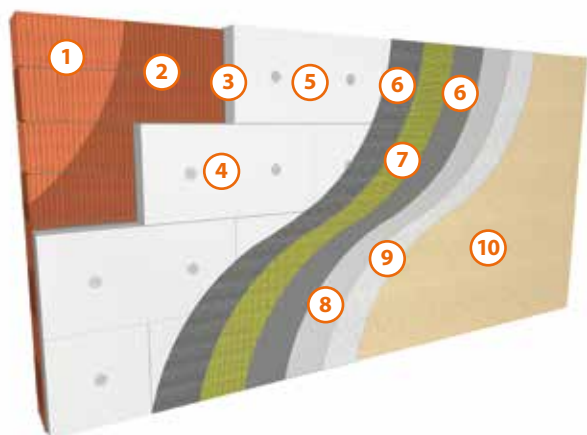




Up to five
European Technical Approvals
for ATLAS insulation systems



EXTERNAL THERMAL INSULATION COMPOSITE SYSTEM ATLAS



1. Ceramic hollow blocks
2. Substrate priming (optional)
3. Adhesive for boards fixing
4. EPS thermal insulation boards
5. Additional fixing – mechanical fixings for polystyrene and XPS
6. Adhesive for base coat application
7. Reinforcing fiberglass mesh
8. Priming mass
9. Thin-coat render
10. Paint

Use

Installation of external wall insulation – can be used both on rendered/plastered façades and rough walls made of bricks and blocks (ceramic, cement-lime, stone, aerated concrete and concrete - monolithic or precast).

Thermal insulation with the use of standard or elastified polystyrene (EPS) - thermal insulation thickness even up to 250 mm.

Installation of external thermal insulation upon buildings up to 25 m high. Can be installed upon surfaces of horizontal or inclined building elements – provided that they are not directly exposed to weather conditions.

Recommended for insulation of standard, passive and energy efficient buildings.

Properties

System meets European technical requirements - listed for thermal insulation systems supplied in the European Union.

Complete set of materials for installation of thermal insulation - offers full and proved compatibility of components, which is particularly important for long term system use.

General - purpose – offers the widest range of adhesives, renders and paints in one technological system.

Enables achievement of thermal insulation parameters required for external walls by building regulations - reduces heat loss and heating costs, offers effective method of thermal bridging elimination.

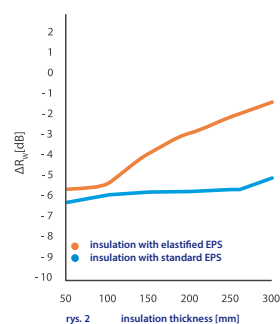
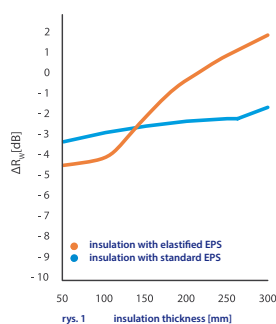
Improves acoustic insulation of walls – owing to the use of elastified polystyrene, the weighted acoustic insulation rate (ΔR_{w}) can be improved by more than three decibels.

Low water absorptiveness – below 0.5 kg/m^2 , therefore system is more resistant to freeze-thaw cycles.

High system impact resistance - provides durability and resistance to damage during system use.

Improves durability of external walls - protects them from direct exposure to weather conditions.

Fire retardant system - relates to thermal insulation system with polystyrene boards (EPS) up to 250 mm thick.



General system characteristics

ATLAS system is an external thermal insulation composite system (ETICS). Thermal insulation technology consists in application of polystyrene (EPS) boards upon the outer side of wall, installation of base coat with reinforcing fiberglass mesh and further application of finishing coat made of thin-coat render.

System components

According to current regulations thermal insulation system is considered in its entirety as one construction product, therefore it must be applied with layers arrangement and with materials listed in the technical approval. It is unacceptable to use, so-called compilations or to use products from other systems or manufacturers, which are not accepted by the technical approval.

According to the European Technical Assessment, products listed in the table below can be used.

Adhesives for thermal insulation fixing – basic fixing ATLAS STOPTER K-10 adhesive mortar ATLAS STOPTER K-20 adhesive mortar ATLAS HOTER S adhesive mortar ATLAS HOTER U adhesive mortar
Insulation material Polystyrene boards (EPS) described by designation code constituted by combination of the following symbols: T2 (thickness); L1 or L2 (length); W2 (width); S1 or S2 (rectangularity); DS(N)2; DS(70,-)1 or DS(70,-)2, BS(75), TR80 (elastified polystyrene) or TR100 (standard polystyrene).
Mechanical fixings – additional fixing Authorized mechanical fixings, holding the European Technical Assessment (ETA) issued in accordance with ETAG 014. Mechanical fixing is not obligatory for buildings up to 12 m and polystyrene thickness up to 15 cm, nevertheless always follow local technical regulations in this regard.
Base coat ATLAS STOPTER K-20 or ATLAS HOTER U adhesive mortar with fiberglass mesh: SSA-1363-SM 05, ATLAS 150 or ATLAS 165.

Finishing coat

ATLAS CERMIT mineral render + ATLAS CERPLAST priming mass
 ATLAS ACRYLIC RENDER + ATLAS CERPLAST priming mass
 ATLAS ACRYLIC-SILICONE RENDER + ATLAS CERPLAST priming mass
 ATLAS SILICONE RENDER + ATLAS SILKON ANX priming mass
 ATLAS SILICONE-SILICATE RENDER + ATLAS SILKON ANX priming mass
 ATLAS CERMIT acrylic render + ATLAS CERPLAST priming mass
 ATLAS SILKAT thin-coat render + ATLAS SILKAT ASX priming mass
 ATLAS SILKON thin-coat render + ATLAS SILKON ANX priming mass
 ATLAS SALTA E acrylic façade paint
 ATLAS SALTA S silicate façade paint + ARKOL SX primer
 ATLAS SALTA N silicone façade paint + ARKOL NX primer
 ATLAS SALTA façade paint
 ATLAS ARKOL E façade paint
 ATLAS ARKOL S façade paint + ARKOL SX primer
 ATLAS FASTEL NOVA façade paint

Technical requirements

ATLAS System has been given:

- the European Technical Assessment No. ETA-06/0081. Declaration of Performance No. 001/CPR. EC Certificate of Conformity No. 1488-CPD-0021.
- NSAI Certificate No. 10/0347 (for Ireland).
- BBA Certificate No. 13/5018 (for the UK).

Requirements on thermal insulation installation**Conditions during installation**

Carry out installation in dry weather, at substrate and ambient temperature not lower than +5°C and not higher than +30°C. The only exception is ATLAS STOPTER K-20 adhesive mortar, which can also be used at 0°C, assuming that, after 8 hours since application completion, temperature does not drop below -5°C. On time of thermal insulation installation, façade should be protected and secured against precipitation, strong wind and direct sunlight - it is recommended to use fine mesh scaffolding covers. Insulation installation should be carried out in dry conditions (no precipitation, relative humidity below 80%).

Substrate preparation**General provisions**

Before work commencement, evaluate the substrate technical condition and, on that basis, decide on scope and method of surface preparation. For the time of installation, remove any elements hindering tight bonding of thermal insulation boards and finishing coat application. An additional layer of insulation will increase the wall thickness, therefore the reach of flashings, downspouts anchors, etc. will have to be extended. Protect windows and doors against soiling with a plastic film.

Requirements on the substrate

The substrate should be sound, stable, even, clean and dry. Absorptive substrates should be primed with ATLAS UNI-GRUNT, smooth and non-absorptive (concrete) with ATLAS CERPLAST priming mass. Substrate should be even to the extent enabling easy execution of a plane formed by insulation boards installed upon walls. Clean the surface from any layers which would impair mortar bonding, dirt, loose and dusty elements. **Note!** Particular attention should be paid to proper assessment and preparation of substrate with problematic bearing capacity, e.g. finished with glass-mosaics, glazed brick, covered with paint coatings, etc. If in doubt, conduct bonding test (ultimate tensile strength should be above 0.08 MPa) or apply 8-10 polystyrene cubes (10x10 cm large) at various façade points and check the bond after 3 days. The use of thermal insulation system on buildings with reinforced concrete sandwich walls should always be preceded by thorough assessment of their technical condition. This applies to technical condition of metal fittings (hooks, pins, rods) as well as their connection and interaction with wall elements.

Starter tracks installation

Application of thermal insulation should commence with installation of starter tracks. They support the first row of thermal insulation boards, help to keep uniform level of successive layers, strengthen bottom edge of system and bottom edge drip prevents water bleeding. Tracks should be installed horizontally upon the building plinth, not lower than 30 cm above the ground level, which would protect against rising damp action and soiling - mud particles brought by raindrops reflected from the ground. Instead of starter tracks, it is permitted to use two layers of fiberglass mesh or strips of armour mesh.

Installation of thermal insulation**Boarding**

In case of even substrates, adhesive mortar can be applied with a notched trowel (notch size 12 mm) – directly upon boards surface, not upon the substrate. In case of more irregular surfaces adhesive should be spread upon board surface with the "strip - point method". It consists in application of continuous circumferential bead (min. 3 cm wide) along the board edges and 6-8 patches (of diameter 8-12 cm) evenly distributed upon the board surface. The mortar bead is placed at a distance from the board edge, so when board is pressed to the wall, mortar is not squeezed out the board contour and side edges. Adhesive mortar applied upon board should coat min. 40% of its surface (60% after pressing the board to substrate). Thermal insulation application should commence from the building

corners. The first row of boards is fixed on starter tracks, the subsequent rows so positioned, that board vertical edges are staggered and overlapped at the building corners. Boards edges must not be placed in line with reveals edges. Place the boards with applied adhesive upon substrate, move tight to already fixed boards and press towards. Check the surface level. If adhesive is squeezed out the board contour, it should be removed. Any gaps between adjoining boards should be filled with cut stripes of polystyrene or low expansion polyurethane foam.

Insulation boards sanding

Surface of insulating boards applied upon substrate should be even, so when the mortar sets (after approx. 24 h), the boards can be sanded with sanding boards or floats covered with coarse sanding paper. This action eliminates any slips of board edges. In case of polystyrene boards installed approx. 3 months earlier or more, sanding and removal of any surface tarnish is mandatory.

Additional elements installation

In order to improve the system resistance against mechanical damage, to allow free drainage of water and execution of expansion joints - finishing profiles should be installed upon fixed thermal insulation layer. Profiles are installed at every specific location of the façade (i.e. corners, reveals, sills, etc.). They can also be installed simultaneously to the base coat mesh embedding.

Strengthening the reveal corners

At any corners of window and door reveals, additional reinforcing mesh strips (rectangles 20 x 30 cm) embedded in the adhesive mortar ATLAS STOPTER K-20 or ATLAS HOTER U should be installed. Strips should be applied diagonally, at a 45° angle in relation to the line set by reveal edges.

Mechanical fixing

Additional fixing with anchors with plastic or steel pins can commence after approx. 24 hours since boards application. Detailed information on the number of fixings, their distribution, length and depth of anchoring should be specified in the thermal insulation technical design. Follow the guidelines of fixings manufacturers.

Base coat (reinforced layer) application

Base coat can be applied when adhesive mortar used for boards fixing sets appropriately (after 3 days on average). Apply mortar upon fixed insulation, spread with a notched trowel (notch size 10 - 12 mm). Adhesive should be spread with vertical strips of width slightly greater than the fiberglass mesh width. Then, starting from the top, subsequent strips of mesh are embedded in the adhesive coat. Consecutive strips should be applied with min. 10 cm wide vertical and horizontal overlaps (15 cm wide at the building corners). The mesh overlaps should not correspond with the joints between insulation boards. The mesh should be thoroughly embedded in the adhesive. In order to embed the mesh evenly, the adhesive should be squeezed with slightly inclined trowel led from the top, in direction from the center to the mesh strip side. Correctly embedded mesh should be completely coated with adhesive and should not contact polystyrene boards directly.

Finishing coat application

The outer system layer can be made of thin-coat render or a thin-coat render coated with façade paint. The execution of finishing coat can commence after approx. 3 days since the base coat installation. One can use thin - coat renders: ATLAS CERMIT mineral, ATLAS ACRYLIC RENDER, ATLAS ACRYLIC-SILICONE RENDER, ATLAS SILICONE RENDER, ATLAS SILICONE-SILICATE RENDER, ATLAS CERMIT acrylic, ATLAS SILKAT or ATLAS SILKON. Rendering coats can be additionally painted with façade paints ATLAS SALTA E, ATLAS SALTA S, ATLAS SALTA N, ATLAS SALTA or ATLAS ARKOL E, ATLAS ARKOL S and ATLAS FASTEL NOVA. Perform application in accordance to the technology described in technical data sheets of these individual products.

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

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