



# ATLAS FASADA

## polystyrene boards for ATLAS external thermal insulation systems

- standard and graphite
- perfect thermal conductivity coefficient  $\lambda_D$  – required partition thermal insulation can be achieved with thinner boards

### Use

**Atlas Fasada** – white polystyrene boards manufactured by double polystyrene foaming and intended for thermal insulation of walls, including thermal insulation of façades. Boards are manufactured in standard dimensions: 1,000 mm long, 500 mm wide, 20 mm thick and then every 10 mm.

**Atlas Fasada Grafit** – grey polystyrene boards made of expanded polystyrene with refined graphite composition added in production process. The addition of graphite improves insulation properties, therefore better thermal resistance can be achieved with thinner boards. Boards are manufactured in standard dimensions: 1,000 mm long, 500 mm wide, 20 mm thick and then every 10 mm.

#### Range of use of Atlas Fasada boards:

- with ATLAS external thermal insulation systems, according to domestic or European technical approvals/assessments,
- external thermal insulation of walls installed with ETICS method (light-wet method, BSO) – if boards meet minimum requirements listed in technical specifications,
- external thermal insulation of walls installed with light-dry method,
- thermal insulation on the surface of stud wall,
- filling expansion joints,
- thermal insulation of enclosed slot of cavity walls,
- thermal insulation of ventilated slot of cavity walls,
- thermal insulation of loggias, balconies
- thermal insulation of jambs, lintels.

**Atlas Fundament** – insulation boards made of special polystyrene of higher hydrophobic properties. Perfect solution for thermal insulation of partitions exposed to long term damp action. Can be used for thermal insulation of foundation walls below ground level (up to 2 m below ground level), floors in damp rooms, damp rooms (wash rooms, cellars), plinths and cellar walls.

### Boards installation

#### Substrate preparation for boarding

The substrate should be frost-free, stable, even and structurally sound, i.e. strong enough, free from layers which would impair the mortar bonding, in particular dust, dirt, lime, oil, grease, wax, remains of emulsion and oil paints. Prior to repair works substrate should be cleaned and, if excessively absorptive, primed with ATLAS UNI-GRUNT emulsion. Prime also weak cement, cement-lime plasters and rough walls made of cellular concrete or hollow cinder blocks. Mayor irregularities or cavities should be filled with ATLAS ZW 330 or ATLAS PLASTERING MIX.

#### Bonding the polystyrene walls

Apply the mortar on the back side of a board with the “strip-point method”, i.e. apply 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. In total, mass should coat min. 40% of the board surface (60% after pressing the board to substrate) and provide appropriate bonding between the board and the wall. Just after mortar application the board should be placed upon substrate and pressed onto expected place, so the mortar thickness beneath the board does not exceed 10 mm. In case of even and smooth substrates, it is acceptable to spread the mortar evenly with a notched trowel upon the whole board surface, so it forms layer 2-5 mm thick after fixing.

#### Boards preparation for base coat

The boards surface should be frost-free, even, clean, stable and dusted, if boards have been grinded since fixing. It is advisable to grind and dust graphite boards prior to base coat application.

#### Types of substrates

concrete cement and cement-lime plasters, rough walls made of bricks, blocks, hollow blocks and other ceramic or silicate materials, cellular concrete.

#### Adhesive mortars

cement and polyurethane.

## Technical data and requirements

FASADA GRAFIT λ 031		FASADA λ 039		FASADA λ 040		FASADA λ 042	
CE 1488, 1434						CE 1488, 1434	
EPS-EN 13163-T1-L2-W2- S <sub>b</sub> 5-P5-BS100-DS(N)2-DS(70,-)2-TR100		EPS-EN 13163-T1-L2-W2-S <sub>b</sub> 5-P5-BS115-CS(10)70-DS(N)2--DS(70,-)2-TR100		EPS-EN T1-L2-W2-S <sub>b</sub> 5-P5-BS100-DS(N)2-DS(70,-)2-TR100		EPS-EN 13163-T1-L2-W2-S <sub>b</sub> 5-P5-BS75-DS(N)2-DS(70,-)2-TR80	
Reaction to fire	E	Reaction to fire	E	Reaction to fire	E	Reaction to fire	E
Thermal conductivity coefficient λ <sub>D</sub>	≤ 0.031 W/mK	Thermal conductivity coefficient λ <sub>D</sub>	≤ 0.039 W/mK	Thermal conductivity coefficient λ <sub>D</sub>	≤ 0.040 W/mK	Thermal conductivity coefficient λ <sub>D</sub>	≤ 0.042 W/mK
Thickness	T1 (±1 mm)	Thickness	T1 (±1 mm)	Thickness	T1 (±1 mm)	Thickness	T1 (±1 mm)
Length and width	L2, W2 (±2 mm)	Length and width	L2, W2 (±2 mm)	Length and width	L2, W2 (±2 mm)	Length and width	L2, W2 (±2 mm)
Rectangularity	S5 (±5 mm/1000 mm)	Rectangularity	S5 (±5 mm/1000 mm)	Rectangularity	S5 (±5 mm/1000 mm)	Rectangularity	S5 (±5 mm/1000 mm)
Flatness	P5 (5 mm)	Flatness	P5 (5 mm)	Flatness	P5 (5 mm)	Flatness	P5 (5 mm)
Bending strength	BS 100 (≥ 100 kPa)	Bending strength	BS 115 (≥ 115 kPa)	Bending strength	BS 100 (≥ 100 kPa)	Bending strength	BS 75 (≥ 75 kPa)
Dimensional stability in constant normal laboratory conditions	DS(N)2 (≤ 0.2%)	Dimensional stability in constant normal laboratory conditions	DS(N)2 (≤ 0.2%)	Dimensional stability in constant normal laboratory conditions	DS(N)2 (≤ 0.2%)	Dimensional stability in constant normal laboratory conditions	DS(N)2 (≤ 0.2%)
Dimensional stability in specified temperature and humidity conditions	DS(70,-)2 (≤ 2%)	Dimensional stability in specified temperature and humidity conditions	DS(70,-)2 (≤ 2%)	Dimensional stability in specified temperature and humidity conditions	DS(70,-)2 (≤ 2%)	Dimensional stability in specified temperature and humidity conditions	DS(70,-)2 (≤ 2%)
Tensile resistance to force perpendicular to front surfaces	TR 100 (≥ 100 kPa)	Tensile resistance to force perpendicular to front surfaces	TR 100 (≥ 100 kPa)	Tensile resistance to force perpendicular to front surfaces	TR 100 (≥ 100 kPa)	Tensile resistance to force perpendicular to front surfaces	TR 80 (≥ 80 kPa)

FASADA λ 045		FUNDAMENT STANDARD λ 038		FUNDAMENT PLUS λ 036	
		CE 1488		CE 1488	
EPS-EN 13163-T1-L2-W2-S <sub>b</sub> 5-P5-BS75-DS(N)2-DS(70,-)2-TR80		EPS-EN 13163 T2-L3-W3-S5-P10-BS150-CS(10)100-DS(N)2-DS(70,-)2-WL(T)3		EPS-EN 13163 T2-L3-W3-S5-P10-BS200-CS(10)150-DS(N)5-DS(70,-)2-WL(T)3	
Reaction to fire	E	Reaction to fire	E	Reaction to fire	E
Thermal conductivity coefficient λ <sub>D</sub>	≤ 0.045 W/mK	Thermal conductivity coefficient λ <sub>D</sub>	≤ 0.038 W/mK	Thermal conductivity coefficient λ <sub>D</sub>	≤ 0.036 W/mK
Thickness	T1 (±1 mm)	Thickness	T2 (±2 mm)	Thickness	T2 (±2 mm)
Length and width	L2, W2 (±2 mm)	Length and width	L3, W3 (±3 mm)	Length and width	L3, W3 (±3 mm)
Rectangularity	S5 (±5 mm/1000 mm)	Rectangularity	S5 (±5 mm/1000 mm)	Rectangularity	S5 (±5 mm/1000 mm)
Flatness	P5 (5 mm)	Flatness	P10 (10 mm)	Flatness	P10 (10 mm)
Bending strength	BS75 (≥ 75 kPa)	Bending strength	BS150 (≥ 150 kPa)	Bending strength	BS 200 (≥ 200 kPa)
Dimensional stability in constant normal laboratory conditions	DS(N)2 (≤ 0.2%)	Dimensional stability in constant normal laboratory conditions	DS(N)2 (≤ 0.2%)	Dimensional stability in constant normal laboratory conditions	DS(N)5 (≤ 0.5%)
Dimensional stability in specified temperature and humidity conditions	DS(70,-)2 (≤ 2%)	Dimensional stability in specified temperature and humidity conditions	DS(70,-)2 (≤ 2%)	Dimensional stability in specified temperature and humidity conditions	DS(70,-)2 (≤ 2%)
Tensile resistance to force perpendicular to front surfaces	TR 80 (≥ 80 kPa)	Tensile resistance to force perpendicular to front surfaces	WL(T)3 (≤ 3%)	Tensile resistance to force perpendicular to front surfaces	WL(T)3 (≤ 3%)

## Important additional information

- Do not fix heated graphite polystyrene. Protect graphite polystyrene against heating up during installation and initial adhesive setting. Heating graphite polystyrene during any of these phases can result in the adhesive loosening.
- When fixing the boards onto poor substrates of hard to determine bearing capacity (e.g. unstable, dusty, hard to clean), it is advisable to conduct a test of bonding. It consists in fixing 8-10 polystyrene cubes (10x10 cm large) at various façade points and checking the bond after 3 days. The substrate strength can be assumed as acceptable when polystyrene cube breaks within when teared off. If the cube tears off with mortar or substrate layer, then the substrate bearing capacity is insufficient. In such case further procedure, e.g. technology of weak layer removal, should be described in the external insulation design.
- In case of prolonged exposition of fixed polystyrene to atmospheric factors, particularly UV radiation, yellowish tarnish can occur on boards surface. Remove the tarnish before base coat application.
- Use scaffolding covers during work. Do not carry out the installation during snowfall, rain and in strong wind.
- Do not use boards in direct contact with substances of destructive effect on polystyrene, e.g. organic solvents (acetone, nitro, benzene, etc.).
- The boards should be transported and stored in original packaging. Protect against mechanical damage and atmospheric factors. Do not keep graphite polystyrene in place exposed to direct sunlight, as it can lead to boards deformation.

## Packaging

Thickness [mm]	Boards per packaging [pcs]	Packaging volume [m <sup>3</sup> ]	Coverage [m <sup>2</sup> ]
20	30	0.30	15.00
30	20	0.30	10.00
40	15	0.30	7.50
50	12	0.30	6.00
60	10	0.30	5.00
70	8	0.28	4.00
80	7	0.28	3.50
90	6	0.27	3.00
100	5	0.30	3.00
110	5	0.275	2.50
120	5	0.30	2.50
130	4	0.26	2.00
140	4	0.28	2.00
150	4	0.30	2.00
160	3	0.24	1.50
170	3	0.255	1.50
180	3	0.27	1.50
190	3	0.285	1.50
200	3	0.300	1.50

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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