



## Green Panel EPS 70 IZOFAS®, IZOFAS® - grooved Green Panel EPS 100 IZOFAS®, IZOFAS® - grooved, STYROHART®, IZODREN® - grooved

SPECIAL-PURPOSE THERMAL INSULATION PANELS

Produced under Marbet Management System in accordance with PN-EN ISO 9001:2009. Producer guarantees the highest quality of the product as confirmed by the statement of conformity with Polish Standard No. PN-EN 13163:2009 - products for thermal insulation in building industry, and CE mark.

### General characteristics

Green Panels EPS 70, 100 are designed as thermal insulation for insulating outside wall elements (IZOFAS®, IZOFAS® - grooved) as well as floors, floorings and flat roofs (STYROHART® and IZODREN® - grooved). The panels come in green or white colour.

The panels are made of expanded polystyrene (EPS) in aggregation technology (individual foaming in moulds rather than cutting from EPS blocks). This technology allows for obtaining complex surface textures to improve mortar adhesion and carry away humidity and water from the area between the insulated wall and EPS panel.

Green Panels are produced in 1220 x 620 mm size (including a 20mm overlap) with the following thicknesses:

- IZOFAS®, STYROHART® every 10 mm in the 30-200 mm range. The actual thickness of the 20cm panel is 198 mm; - IZOFAS® - grooved, IZODREN® - grooved 50, 80, 100, 120, 150 mm.

One panel covers 0.72 m<sup>2</sup> (120 x 60 cm). The panels overlap vertically and horizontally.

### Features

- IMPROVED HEAT-INSULATING PROPERTIES - individual injection technology results in perfect foaming of every panel and stability of its heat-insulating properties.
- SPECIALLY SHAPED OVERLAPPING EDGES - they prevent cold bridges and provide tight heat insulation over the entire insulated surface, even when the panels are not laid with high precision.
- REPEATABLE AND STABLE DIMENSIONS - the injection technology allows for producing panels with identical dimensions. No matter how long the panels are stored, they do not warp.
- GREEN COLOUR - green colour across the entire cross section means that 100% pure materials are used for producing every panel, which guarantees stability of all its properties.
- INCREASED DIMENSIONS - to ensure more time-effective laying.

### Use

Recommended use of the EPS panels:

- outside wall insulation (IZOFAS®, IZOFAS® - grooved): cold bridges, stub walls, between-wall spaces, walls and roofs (between-rafter spaces) of buildings including composite walls, insulated render/cladding, siding and wood-framed walls (where humidity must be removed from the insulated partitions and grooved panels are recommended).

- horizontal insulation (STYROHART®, IZODREN® - grooved): floors, floorings, under floor heating, flat roofs.

Green Panels EPS 70 or 100 should be chosen by the architect depending on the intended use and expected loads.

### Chemical resistance

Green Panels do not react chemically with any solid materials used at construction site. They are resistant to aging. They do not biodegrade in damp environment, retaining their physical properties, shape and dimensions. The panels are environment-friendly and do not contain any hazardous substances. They are **not** resistant to organic solvents, including acetone, benzol, nitro, petrol, etc.

Basic technical parameters		Green Panels ... IZOFAS®, IZOFAS® - grooved, STYROHART®, IZODREN® -grooved	
		EPS 70	EPS 100
1.	Apparent density (kg/m <sup>3</sup> )	≥ 15	≥ 20
2.	Compressive stress with 10% true strain (kPa)	≥ 70 CS 10 (70)*	≥ 100 CS 10 (100)*
3.	Binding strength (kPa)	≥ 115 BS 115*	≥ 170 BS 170*
4.	Tensile strength perpendicular to panel surface (kPa)	≥ 100 TR100*	≥ 200 TR200*
5.	Compressive strain at specific compression and temperature	n/a	20kPa/80°C/48h DLT(1)5*
6.	Heat conductivity coefficient at 10°C (declared value) λ <sub>D</sub> (W/mK)	≤ 0.040*	≤ 0.036*
9.	Dimension stability under normal laboratory conditions (%)	± 0.2 DS.(N)2*	
10.	Dimension stability (%) after 48 hours at 70°C	2 DS ( 70, - ) 2*	1 DS ( 70,90 ) 1*
11.	Dimensions (mm) - width (W2)* - length (L2)* - thickness (T2)* - flatness (P4)* - rectangularity (S2)*	600 ± 2 mm 1200 ± 2 mm (every 10 mm in the 30-190 mm range plus 198 mm) ± 1 mm ± 5 mm ± 2 mm / 1000 mm	
12.	Fire resistance	Class E	

\*) - Declared levels in accordance with PN-EN 13163:2009 ,

**Laying, working and storing**

One of the many advantages of EPS is that it is very easy to work with and poses no health hazards. The Green Panels can be easily cut with a fine-toothed hand saw. Using a knife, virtually any shape can be obtained.

Marbet recommends that insulation work should be done according to good engineering practice; in particular, complete and approved systems of thermal insulation should be used (without mixing products from different manufacturers).

Long exposure to UV degrades the surface of the panels so they should be protected properly during storing and laying.

**Thermal resistance and packaging**

Declared thermal resistance of Green Panels ..... [m<sup>2</sup>K/W]

EPS 70 IZOFAS	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	4.95
EPS 70 IZOFAS -grooved			1.15			1.90		2.40		2.90			3.65					
EPS 100 IZOFAS STYROHART	0.80	1.10	1.35	1.65	1.90	2.20	2.50	2.75	3.05	3.30	3.60	3.85	4.15	4.40	4.70	5.00	5.25	5.50
EPS 100 IZOFAS -grooved IZODREN -grooved			1.25			2.10		2.65		3.20			4.05					
<b>THICKNESS</b>	<b>30</b>	<b>40</b>	<b>50</b>	<b>60</b>	<b>70</b>	<b>80</b>	<b>90</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>140</b>	<b>150</b>	<b>160</b>	<b>170</b>	<b>180</b>	<b>190</b>	<b>198</b>

Packaging, covering surface, volume

Amount of panels per package [pcs]	16	12	10	8	7	6	5	5	5	4	4	4	3	3	3	3	3	3
Covering surface per package [m <sup>2</sup> ]	11.52	8.64	7.20	5.76	5.04	4.32	3.60	3.60	3.60	2.88	2.88	2.88	2.16	2.16	2.16	2.16	2.16	2.16
Package volume [m <sup>3</sup> ]	0.346	0.346	0.360	0.346	0.353	0.346	0.324	0.360	0.396	0.346	0.374	0.403	0.324	0.346	0.367	0.389	0.410	0.432

**Basic documents**

Polish Standards Certificate No. PN-EN 13163:2009  
 Hygienic Certificate No. HK/B/1267/06/2006

This technical card replaces all earlier product specifications.

