

## TERMONIUM fasada (facade) expanded polystyrene boards

### Description

The product complies with the harmonized standard EN 13163:2012+A1:2015

TERMONIUM fasada EPS S EPS-EN 13163-T(1)-L(2)-W(2)-Sb(5)-P(5)-BS75-DS(N)2-DS(70,-)2-TR80

Those are silvery and gray boards produced on the basis of innovative material refined, for example, by graphite, which after being added to the granules in the polystyrene production process, improves insulation features. Therefore, it is possible to obtain better thermal insulation results or the same ones with lower thickness. They are intended for thermal insulation of walls, including facades. The boards may be produced with flat or milled edges enabling proper fitting. The boards are manufactured in standard dimensions: 1000 mm long, 500 mm wide, 10 mm thick, and then every 10 mm.

### Application

- external thermal insulation done by means of ETICS (light-wet method, BSO)
- external thermal insulation done by means of light-dry method
- thermal insulation on the surface of stud walls
- thermal insulation in the enclosed slot of cavity walls
- thermal insulation in the ventilated slot of cavity walls
- insulation of tie beams, lintels and other thermal bridges
- insulation of balcony loggias
- thermal insulation of window jambs
- thermal insulation of window lintels
- thermal insulation of any layered walls
- continuous outer layer thermal insulation on plinth walls
- filling expansion joints

### Implementation

The EPS foam boards should be used in accordance with the manufacturer's instructions, RTQ ITB 1261/2013 Technical and Quality Recommendations, and guidelines included in a construction design. After having been fixed to an external wall, EPS boards should be immediately covered with an outer layer: reinforced layer and plaster of thermal insulation systems, facade panels

in cavity walls, etc. Before fitting TERMONIUM boards, sunlit facades should be covered with a protective net with the aim of protecting the EPS against the direct influence of weather conditions (UV radiation) which have a destructive effect on EPS surface. TERMONIUM fasada boards should be protected against excessive heat (dark colour absorbs the sun's rays). In case of a long-term exposure to atmospheric factors, the surface layer of boards can be covered with gray coating. In this case, before a reinforced layer is applied by means of ETICS, remove the coating with fine sandpaper or a polisher until there are no loose particles weakening the adhesion to the polystyrene on the surface. In order to fix TERMONIUM fasada boards, use TO-KPS polyurethane adhesive (together with mechanical fasteners) or TO-KS adhesive. To apply a reinforced layer, apply TO-KU universal adhesive or TO-KUB universal white adhesive and TO-S145 or TO-S170 mesh. TERMONIUM fasada boards adhered to facades should be protected against the direct contact with sunlight by using protective net during work and at least three days after its completion.

### Caution

Do not use the EPS boards in direct contact with the substances having destructive effect on polystyrene EPS, such as organic solvents (acetone, benzene, nitro), etc.

### Package, storage, transportation

TERMONIUM fasada boards are supplied only in the original manufacturer's packaging. The label on a package contains the following information: the name of a product, the manufacturer's name and a factory name, the date of production, EN EN 13163:2012+A1:2015 standard number, a code compatible with that standard, and declared technical features. TERMONIUM fasada boards should be protected against damaging and weather conditions (especially the sun).

### Documentation

- Declaration of performance no. 014-DoP-150715
- Certificate of Conformity with ITB-851/W standard
- RTQ ITB-1261/2013 Technical & Quality Recommendations of the Building Research Institute
- HK/B/0085/01/2013 Hygienic Certificate

Polystyrene subjected to voluntary certification and recommendation procedure at Building Research Institute (Polish: ITB), not resulting from the system of assessment and verification of performance constancy.

Properties of TERMONIUM fasada expanded polystyrene boards

Properties	class or level
Dimension tolerance classes: <ul style="list-style-type: none"> <li>• thickness</li> <li>• length</li> <li>• width</li> <li>• rectangularity</li> <li>• flatness</li> </ul>	T(1) ± 1 mm L(2) ± 2 mm W(2) ± 2 mm Sb(5) ± 5 mm /m P(5) 5 mm
Bending strength level	BS75 ≥ 75 kPa
Class of dimensional stability under constant normal laboratory conditions	DS(N)2 ± 0.2%
Level of dimensional stability under specified temperature and humidity conditions (70 °C, 48 h)	DS(70,-)2 2%
Tensile resistance to a force perpendicular to front surfaces	TR80 ≥ 80 kPa
Declared thermal conductivity ratio $\lambda_D$ , at a temperature of 10°C	0.032 W/(m•K)
Fire reaction class	E

Value of thermal resistance  $R_D$ , depending on the thickness of TERMONIUM fasada boards

Thickness, mm	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
$R_D$ , m <sup>2</sup> K/W	0,30	0,60	0,90	1,25	1,55	1,85	2,15	2,50	2,80	3,10	3,40	3,75	4,05	4,35	4,65
Thickness, mm	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
$R_D$ , m <sup>2</sup> K/W	5,00	5,30	5,60	5,90	6,25	6,55	6,85	7,15	7,50	7,80	8,10	8,40	8,75	9,05	9,35

Number of boards in package, volume of packages and package size for each board thickness. Standard size of TERMONIUM fasada board: 1000 mm x 500 mm

Thickness, mm	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	200
Number of boards in package (pcs)	60	30	20	15	12	10	8	7	6	6	5	5	4	4	4	3	3	3	3
Plain boards																			
Volume of package (m <sup>3</sup> )	0.300	0.300	0.300	0.300	0.300	0.300	0.280	0.280	0.270	0.300	0.275	0.30	0.260	0.280	0.300	0.240	0.255	0.270	0.300
Area of boards in package (m <sup>2</sup> )	30.00	15.00	10.00	7.50	6.00	5.00	4.00	3.50	3.00	3.00	2.50	2.50	2.00	2.00	2.00	1.50	1.50	1.50	1.50
Moulded boards																			
Volume of package (m <sup>3</sup> )				0.284	0.284	0.284	0.265	0.265	0.256	0.284	0.260	0.284	0.246	0.265	0.284	0.227	0.241	0.256	0.284
Area of boards in package (m <sup>2</sup> )				7.10	5.68	4.73	3.79	3.31	2.84	2.84	2.37	2.37	1.89	1.89	1.89	1.42	1.42	1.42	1.42

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