

Chorzów, 30.12.2022 r.

## Technical data sheet

### Polystyrene panels EPS 036 TERRA AQUA BASE



#### DESCRIPTION:

EPS 100 036 TERRA AQUA BASE

Code of designation: EPS EN 13163 T(1)-L(2)-W(2)-S<sub>b</sub>(5)-P(5)-BS150-CS(10)100-DS(N)2-DS(70,-)1-DLT(1)5-WL(T)4

The product complies with harmonised standard applicable for this product type: EN 13163:2012+A1:2015 Thermal insulation products for buildings – Factory made expanded polystyrene (EPS) products – Specification.

Panels made of properly selected raw material.

Standard dimensions of panels: 1000 x 500 mm. Customised dimensions on request.

Panel thickness: 10 – 500 mm

Panels can be manufactured with even or finely-milled edges.

#### USE:

EPS 036 TERRA AQUA BASE expanded polystyrene panels with the addition of hydrophobic substances, minimizing water absorption.

Thanks to this solution, panels are applied for insulation of the places requiring the shift of extensive mechanical loads and being in direct contact with water and soil, among others:

- insulation of basement walls and foundations as well as socles,
- insulation of parking areas, driveways and terraces under extensive load,
- insulations in road construction, railway construction and civil engineering structures,
- insulation of flat roofs,
- insulation of rooms with high humidity

Polystyrene panels should be used according to the manufacturer's recommendations, guidelines defined in construction design and rules of the trade which means that investment should be implemented in accordance with any and all legal and technical regulations applicable in the construction industry, while maintaining due diligence and taking advantage of the best professional knowledge. Do not use panels in a direct contact with substances having a destructive effect on EPS polystyrene, e.g. organic solvents (acetone, benzene, nitro), etc. For the use below the ground level, it is recommended to cover panels with a layer of waterproofing made from dimpled membrane or PE foil.

#### PACKING, STORAGE, TRANSPORT:

EPS 036 TERRA AQUA BASE polystyrene panels are delivered only in original Manufacturer's packaging. Polystyrene panels should be stored in a manner preventing them against damage, and protected against direct effect of weather conditions (UV radiation) which destructively affect the surface of polystyrene.

Leaving polystyrene for a longer time with no cover can cause tarnish to appear over its surface. In such case before application of panels it is necessary to remove the tarnish by grinding.

Documentation:

- Declaration of Performance no. 17/S036\_100TA
- Information on EPS safety and operation

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**PERFORMANCE:**

Essential characteristics for the intended use, for thermal insulation in the construction industry	Declared performance, class or level
Dimensional tolerance class: thickness, length, width, rectangularity, flatness	T1 (± 1 mm) L2 (± 2 mm) W2 (± 2 mm) S <sub>0,5</sub> (± 5 mm/1m) P5 (5 mm)
Bending strength	BS 150 ≥ 150 kPa
Dimensional stability under constant normal laboratory conditions	DS(N)2 ± 0,2 %
Dimensional stability under specific conditions - temperature 70 °C, 48 h	DS(70,-)1 ≤ 1 %
Compressive stress with 10% relative deformation	CS(10)100 ≥ 100 kPa
Declared thermal conductivity coefficient λ <sub>D</sub>	0,036 W/(m K)
Deformation in specified compression load and temperature conditions	DLT(1)5 ≤ 5%
Water absorption with prolonged total immersion	WL(T)4 ≤ 4 %
Thermal resistance R <sub>D</sub>	Table 2
Reaction-to-fire class	E

Table no. 2 Summary of thermal resistance as a function of thickness

Thickness, d <sub>N</sub> [mm]	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
Thermal resistance R <sub>D</sub> [m <sup>2</sup> K/W]	0,25	0,55	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
Thickness, d <sub>N</sub> [mm]	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300
Thermal resistance R <sub>D</sub> [m <sup>2</sup> K/W]	4,40	4,70	5,00	5,25	5,55	5,80	6,10	6,35	6,65	6,90	7,20	7,50	7,75	8,05	8,30

Standard dimensions of panels: 1000 x 500 mm.

Table no. 3 Packaging

PANEL THICKNESS (m)	0,01	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,10	0,11	0,12	0,13	0,14	0,15
PACKAGE VOLUME (m <sup>3</sup> ) even edges	0,300	0,300	0,300	0,300	0,300	0,300	0,280	0,280	0,270	0,300	0,275	0,300	0,260	0,280	0,300
PACKAGE VOLUME (m <sup>3</sup> ) finely-milled edges	-	-	-	-	0,282	0,282	0,263	0,263	0,254	0,282	0,259	0,282	0,245	0,263	0,282
PANEL AREA (m <sup>2</sup> ) even edges	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
PANEL AREA (m <sup>2</sup> ) finely-milled edges	-	-	-	-	5,64	4,70	3,76	3,29	2,82	2,82	2,35	2,35	1,88	1,88	1,88
NUMBER OF PANELS IN PACKAGE (pcs)	60	30	20	15	12	10	8	7	6	6	5	5	4	4	4
PANEL THICKNESS (m)	0,16	0,17	0,18	0,19	0,20	0,21	0,22	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,30
PACKAGE VOLUME (m <sup>3</sup> ) even edges	0,320	0,255	0,270	0,290	0,300	0,315	0,220	0,230	0,240	0,250	0,260	0,270	0,280	0,290	0,300
PACKAGE VOLUME (m <sup>3</sup> ) finely-milled edges	0,301	0,240	0,254	0,273	0,282	0,296	0,207	0,216	0,226	0,235	0,245	0,254	0,263	0,273	0,282
PANEL AREA (m <sup>2</sup> ) even edges	2,00	1,50	1,50	1,50	1,50	1,50	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
PANEL AREA (m <sup>2</sup> ) finely-milled edges	1,88	1,41	1,41	1,41	1,41	1,41	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94	0,94
NUMBER OF PANELS IN PACKAGE (pcs)	4	3	3	3	3	3	2	2	2	2	2	2	2	2	2

