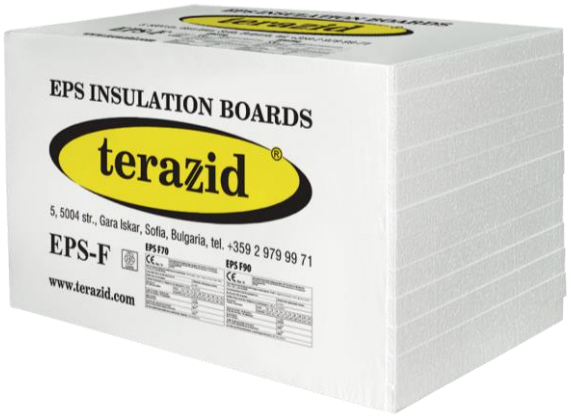
TECHNICAL DATA SHEET

EPS F90

EPS insulation boards for facades

According to the requirements of
EN 13163:2012

Thermal insulation boards from expanded polystyrene



PURPOSE

The **EPS F90** boards are designed for thermal insulation of new facades and for renovation of old buildings. The product's excellent performance characteristics determine its application as preferred material for insulating of facades, walls and ceilings of every type of buildings.

EPS F90 is factory shaped, cut and packed in stacks, with thermal insulation boards dimensions of 50 cm/100 cm and available thicknesses from 1 cm – 20 cm.

PROPERTIES

- excellent thermal insulation properties
- accurate dimensions
- wide variety of thicknesses
- resistant to aging
- does not shrink

PREPARATION OF THE BASE

The base must be with the required baring capacity, dry, strong, free of grease, dust and cracks. In case of repairing facade surfaces, unstable areas should be removed and the areas with old paint and grease spots should be carefully washed. Repaired sections must have the same strength and bearing capacity as the old base. The base should not be frozen.

APPLICATION AND PROCESSING

The application of **EPS F90** boards starts with socle profile with the necessary thickness and water-drop profile. The socle profile should be mechanically fixed to the base. The boards should be bond, closely placed to one another. The joint between two sheets of every row is passing with the one from the row before with 50 cm or half a sheet (the so-called "longitudinal brick bandage").

Bonding: The adhesive is applied on the board contour and at three points in the middle. When the base is smooth and even, the adhesive can be applied with a comb-shaped mortarboard on the entire surface of the insulation board.

The **EPS F90** boards should be well pressed to one another and aligned, to achieve smooth and flat surface. When all the sheets are arranged to one another, the joints forming between them should be filled with EPS cuttings or polyurethane foam. Do not allow adhesive or coating material to enter the joints, as "thermal bridges" will form.

Shaping the facade edges should be done with crossing of the boards from the both sides alternating rows. The insulation boards for openings, arcs, lintels, window sections, etc., should be formed and applied after the main insulation on the facade.

When all the boards are bonded and the joints are filled, the thermal insulation surface should be sanded carefully for maximum smoothing, hiding possible edges and preparing the base for plastering. EPS boards that are standing out of the facade line, should be cut and removed after the insulation bonding has been done.

Dowelling: The additional mechanical fixing of the **EPS F90** boards is recommended to be done with special anchors, 24 hours after bonding. The type of the anchors is determined by the material of the base and at least 3 anchors per board should be used. The anchors must penetrate and securely fixed at least 4-5 cm into the base, without standing above of the EPS board surface. The hollows around the anchor heads should be filled and smoothed with coating mass, at least 12 hours before the reinforcing plaster application. Each plate must be additionally fixed with at least two anchors around the building edges, at a 40 cm distance from the edge.

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Plastering: The plaster should be applied over the boards with the help of a comb-shaped mortarboard (10 mm). While the layer is still fresh, a reinforcing mesh should be applied in vertical columns with overlapping of the edges for at least 10 cm. The already reinforced coating should be finally smoothed and prepared for the subsequent operations.

CONSUMPTION

- 2 boards/m²

WEATHER CONDITIONS FOR APPLICATION

The minimum twenty-four-hour temperature of the air and the base should not be less than +5˚C, and the maximum – not higher than +30˚C.

WORKING TOOLS

- mortar board
- trowel
- sandpaper
- model knife

FORM OF DELIVERY

- Boards (50 / 100 cm) foiled in a package with a volume of around 0.3 m³.

NOTES

All internal coatings, screeds, plasters, etc. as well as roof constructions and operations should be all done before bonding of the EPS boards, due to wetting of the walls is not allowed after the thermal insulation is already applied. Passages, openings, sheet metal coverings, eaves, etc., which are situated next to the thermal insulation boards should be properly sealed and protected from moisture penetration and pests.

Characteristics and technical data of the product, pointed out into this Technical Data Sheet are defined at a standard temperature (20˚C) and relative humidity (50%). In other weather conditions, the technological time for some of the processes, mentioned above, could be shorter or longer.

The information of the product is based on the practical experience of the manufacturer and the technical tests in specialized laboratories.

EPS F90 is not classified as dangerous or harmful.

STORAGE

In sheltered, dry and ventilated stores. Protect from direct sunlight.

CHARACTERISTICS AND TECHNICAL DATA

Reaction to fire		Euroclass E								
Density		15.1 kg/m³								
Coefficient of heat transmission t = 10°C, **λ**		0.0285 W/m.K								
Heat resistance	d [mm]	20	30	40	50	60	70	80	100	120	150
	R_D [m².K/W]	0.61	0.92	1.24	1.54	1.85	2.15	2.46	3.08	3.69	4.62
Resistant to water vapour diffusion, **μ**		82								
Water absorption at partial submersion (48 hours)		0,031 kg/m²								
Water absorption at full submersion (7 days), method 2A		0,79 %								
Compressive strength – 10% deformation		≥ 100 kPa **CS(10)100**								
Bending strength		≥ 200 kPa **BS200**								
Tensile strength, perpendicular to the surface		≥ 210 kPa **TR210**								