Technical sheet



# KNAUF Therm ETIXX façade $\lambda$ 31

KNAUF Therm ETIXX façade  $\lambda$  31 polystyrene panels are designated by the following code according to PN-EN standard EN 13163:2012+A1:2015

EPS EN 13163 T(2)-L(2)-W(2)-S(5)-P(5)-BS100-DS(N)5-DS(70,-)2-TR100

KNAUF Therm ETIXX façade  $\lambda$  31 polystyrene panels are pressed from expanded polystyrene with an enrichening additive. The enriched composition of graphite added to polystyrene improves insulating properties, thanks to which better thermal insulation effects are achieved at lower panel thicknesses. The panels have straight edges.

### PURPOSE

- exterior thermal insulation made using the ETICS ("light wet" = BSO) method
- exterior thermal insulation made using the "light dry" method
- Thermal insulation on skeleton wall surface
- thermal insulation in closed gap of tri-layer wall
- thermal insulation in ventilated gap of tri-layer wall
- thermal insulation of balcony loggias
- thermal insulation of tie beams, window reveals and lintels

## PRIMARY ADVANTAGES OF KNAUF Therm ETIXX façade $\lambda$ 31

Approx. 30% lower panel thickness in comparison to ordinary polystyrene (possibility of using panel on balconies and loggias without significant losses of residential areas)

- greater or equal thermal insulating power of panels at lower thickness in comparison to ordinary polystyrene panels
- manufactured from foamed polystyrene enriched with graphite particles for excellent insulating parameters (low thermal conductivity  $\lambda = 0.031$ W/mK)
- the pressing technology ensures high dimensional stability
  the panel has straight edges and a flat surface
- large panel dimensions: 1200 x 600 mm 20% greater than the dimensions of a standard polystyrene panel





#### **PATENTED PANEL DESIGN**

## The design of the panel is protected by a EUROPEAN PATENT

• The panels are made of a special graphite raw material, have a unique format and characteristic design features on both surfaces. ETIXX panels are marked with the logotype of the KNAUF Therm construction insulation brand







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# GUIDELINES FOR FASTENING KNAUF Therm ETIXX façade $\lambda$ 31 PANELS: GLUING AND ANCHORING

Before commencing installation of KNAUF Therm ETIXX façade  $\lambda$  31 panels, check the condition of the substrate. The substrate must be carrying, clean and degreased. Loose fragments poorly bound to the substrate are to be removed before gluing of polystyrene panels.

The panel should be installed in accordance with the direction indicated by the arrow on the side of the panel.

KNAUF Therm ETIXX façade  $\lambda$  31 should be glued with universal fiber-reinforced adhesive, e.g., KNAUF FIBER-REINFORCED ADHESIVE or Knauf Therm Expert polyurethane adhesive.



After the panel is pressed to the wall, the gluing area should not be smaller than 40%. Adhesive cements should be applied along the perimeter and in specific points. The bottom side of the panel has indicated glue application points (points and frame).



For polyurethane adhesive, the gluing diagram is as follows:



In addition to adhesives, KNAUF Therm ETIXX façade  $\lambda$  31 panels should be fixed with mechanical fasteners with a metal or plastic pin. The minimum number of fasteners should be 4 pcs./m<sup>2</sup>. The places for the installation of mechanical fasteners are marked on the top side of the panel. Proposed anchor installation points are depicted in the pictures below:









# GUIDELINES FOR FASTENING KNAUF Therm ETIXX façade $\lambda$ 31 PANELS: SUNLIGHT PROTECTION

KNAUF Therm ETIXX façade  $\lambda$  31 graphite polystyrene has elevated resistance to UV radiation, however long-term, direct exposure to UV radiation may cause a yellowish tarnish on a panel's surface. This tarnish must be removed before execution of the reinforcing layer.

It is recommended to use KNAUF FIBER-REINFORCED GLUE and KNAUF REINFORCING MESH to make the reinforced layer.

Shielding façade meshes should be used during work. KNAUF Therm ETIXX façade  $\lambda$  31 panels glued to the façade are to be protected against the direct action of sunlight and weather by using façade meshes on scaffolding.

#### **ATTENTION**

**TECHNICAL DATA** 

Panels are to be protected against direct contact with substances that act destructively on polystyrene, e.g. organic solvents (acetone, nitroglycerin, benzene, etc.).

λD Thermal conductivity coefficient W/(mK)	≤ <b>0.031</b>
Edge shape	rectangular
Dimensions [mm]	1200 x 600
Self-extinguishing capacity	SELF- EXTINGUISHING
Class of reaction to fire	E
Bending strength (kPa)	BS 100 (≥ 100 )
Tensile strength (force applied perpendicularly to face surfaces) [kPa]	TR 100 (≥ 100 )

#### PACKAGING, STORAGE, TRANSPORT

KNAUF Therm ETIXX façade  $\lambda$  31 polystyrene panels are only delivered in the manufacturer's, i.e. KNAUF Industries, original packaging. The packaging contains information concerning: product name, name of manufacturer, production date, Polish Standard no. PN-EN 13163:2012+A1:2015, code according to standard, and declared technical parameters.



KNAUF Therm ETIXX façade  $\lambda$  31 graphite polystyrene is to be stored in a manner that protects them against mechanical damage and the weather.

Panel thickness [mm]	150	200	300
Number of panels per package	4	3	2
Thermal resistance [m <sup>2</sup> K/W]	4.65	6.25	9.35
Package volume [m <sup>3</sup> ]	0.432	0.432	0.432
Covered area [m <sup>2</sup> ]	2.88	2.16	1.44