

## KNAUF Therm Expert Facade $\lambda$ 31



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

**EPS EN 13163 T(1)-L(2)-W(2)-S(5)-P(10)-BS100-DS(N)2-D-S(70,-)2-TR100**

KNAUF Therm EXPERT Facade  $\lambda$  31 polystyrene panels are manufactured on the basis of expanded polystyrene with the addition of an enriched raw material added during the manufacturing process. The enriched composition of graphite added to polystyrene improves insulating properties, thanks to which better thermal insulation effects are achieved at lower panel thicknesses. Panels are manufactured in two versions – white or seamed. The seamed version allows for laying of panels with overlap.

### PURPOSE

- exterior thermal insulation made using ETICS the „light wet” method
- exterior thermal insulation made using ETICS the „light dry” method
- Thermal insulation:
  - on skeleton wall surface
  - in closed gap of tri-layer wall
  - in ventilated gap of tri-layer wall
  - of balcony loggias
  - of tie beams, window reveals and lintels
- filling of expansion joints

### BASIC ADVANTAGES OF KNAUF THERM EXPERT FACADE $\lambda$ 31

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

- greater or equal thermal insulating power of panel at lower thickness in comparison to white polystyrene panels

### GUIDELINES FOR FASTENING KNAUF THERM EXPERT FACADE $\lambda$ 31

Before commencing installation of KNAUF Therm EXPERT Facade  $\lambda$  31 panels, check the condition of the substrate. The substrate must be load-bearing, clean and degreased. Loose fragments poorly bound to the substrate should be removed before gluing polystyrene panels.

Universal KNAUF FIBER-REINFORCED GLUE is recommended for gluing of KNAUF Therm EXPERT Facade  $\lambda$  31 panels. Before applying glue onto the panel we recommend to sand the surface of each KNAUF Therm EXPERT Facade  $\lambda$  31 panel with fine-grained sandpaper to „roughen” it. This will facilitate adhesion of glue to the panel’s surface during its fastening to the wall.

KNAUF Therm EXPERT Facade  $\lambda$  31 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 applying of the reinforcing layer.

We recommend using KNAUF FIBER-REINFORCED GLUE and KNAUF REINFORCING MESH to make the reinforced layer.

Shielding facade meshes should be used during work. Protect KNAUF Therm EXPERT Facade  $\lambda$  31 panels glued to the facade against the direct sunlight and weather, with facade meshes on scaffolding.

**ATTENTION**

Protect panels against direct contact with substances damaging polystyrene, e.g. organic solvents (acetone, nitroglycerin, benzene, etc.)

**TECHNICAL DATA**

$\lambda_D$ Thermal conductivity coefficient W/(mK)	$\leq 0.031$
Edge shape	rectangular / seamed
Dimensions	1000 x 500 mm max. dimensions 4000x1200 mm
Self-extinguishing capacity	SELF-EXTINGUISHING
Class of reaction to fire	E
Bending strength (kPa)	BS 100 ( $\geq 100$ )
Tensile strength (force applied perpendicularly to face surfaces) [kPa]	TR 100 ( $\geq 100$ )

**PACKAGING, STORAGE, TRANSPORT**

KNAUF Therm EXPERT Facade  $\lambda$  31 polystyrene panels are solely delivered in the manufacturer's, original packaging. A product's packaging contains information concerning: product name, name of manufacturer, production date, European Standard no. EN 13163:2012+A1:2015, code according to Standard, and declared technical parameters.

KNAUF Therm EXPERT Facade  $\lambda$  31 should be stored in a manner that protects them against mechanical damage and the weather conditions.

Packaging		Thermal resistance	Standard format 1000*500 [mm]		Seamed panels 990*490 [mm]	
Panel thickness [mm]	Number of panels per package [pcs.]	$R_D$ [m <sup>2</sup> *K/W]	Package volume [m <sup>3</sup> ]	Covered area [m <sup>2</sup> ]	Package volume [m <sup>3</sup> ]	Covered area [m <sup>2</sup> ]
10	56	0,30	0,28	28	-	-
20	30	0,60	0,3	15	-	-
30	20	0,90	0,3	10	-	-
40	15	1,25	0,3	7,5	-	-
50	12	1,55	0,3	6	0,292	5,820
60	10	1,85	0,3	5	0,291	4,850
70	8	2,15	0,28	4	0,272	3,880
80	7	2,50	0,28	3,5	0,272	3,395
90	6	2,80	0,27	3	0,262	2,910
100	6	3,10	0,3	3	0,291	2,910
110	5	3,40	0,275	2,5	0,267	2,425
120	5	3,75	0,3	2,5	0,291	2,425
130	4	4,05	0,26	2	0,252	1,940
140	4	4,35	0,28	2	0,272	1,940
150	4	4,65	0,3	2	0,291	1,940
160	3	5,00	0,24	1,5	0,233	1,455
170	3	5,30	0,255	1,5	0,248	1,455
180	3	5,60	0,27	1,5	0,262	1,455
190	3	5,95	0,285	1,5	0,277	1,455
200	3	6,25	0,3	1,5	0,291	1,455
210	2	6,55	0,21	1	0,204	0,970
220	2	6,85	0,22	1	0,213	0,970
230	2	7,20	0,23	1	0,223	0,970
240	2	7,50	0,24	1	0,233	0,970
250	2	7,80	0,25	1	0,243	0,970
260	2	8,10	0,26	1	0,252	0,970
270	2	8,45	0,27	1	0,262	0,970
280	2	8,75	0,28	1	0,272	0,970
290	2	9,05	0,29	1	0,281	0,970
300	2	9,35	0,3	1	0,291	0,970