

EKO1 - E40 CEILING

TECHNICAL DATA SHEET

Description

- interior single cladding of the ceiling

Composition thickness 64 mm

- wooden grating thickness 24 mm
- E40 Ekopanely board

Recommended use

- horizontal ceiling and roof structures

Restrictions

- min. 120 mm width of the wooden grating to ensure the fire resistance of the ceiling
- the joint between the Ekopanely boards must always be underlaid by a wooden structure to ensure the fire resistance of the ceiling
- Ekopanely boards must be laid parallel lengthwise to the wooden grating (the straw fibers in the Ekopanely boards are laid perpendicular to the grating)



Technical information and parameters

DESCRIPTION	VALUE	UNIT	LEGAL REGULATION
1x E40 Ekopanely board dimensions: thickness	38 (tolerance + 2 mm)	mm	
width	800	mm	
length	1200 - 3200	mm	
heat transfer coefficient U *	0.144	W/m ² .K	ČSN 73 0540-2
phase shift	8	h	
fire resistance	REI 30 DP3		EN 13501-2, EN 1365-2
fire response category	E		EN 13501-1

* U = heat transfer coefficient calculated only for insulating materials (without correction of thermal bridges)

Note

- the standard thermal insulation in the wall is mineral ($\lambda = 0.037$ W / m.K) thickness 140 mm
- delivery methods and storage conditions are provided in the technical data sheet of the product

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Installation procedure

- cutting (circular saw, jig saw) → edge bonding
- laying of Ekopanely boards in one row - only the face side on the outer surface (↓ TOP ↓)
- installation of wiring in the installation space (wooden grating)
- cutting of holes for wiring (bore drill diameter 68 mm - KP 64 LD or diameter 73 mm - KU 68 LD, KPRL 68-70 LD)
- hanging of objects → screwing in of screws without pre-drilling and plastic wall plugs

EKO1 – E40 CEILING CLADDING

- conditions:
 - the load bearing structure of the ceiling has to be implemented according to the static assessment regulations (axial distance of elements up to a max. of 1200 mm and their profile shall be prescribed by a structural engineer which should assess each construction individually)
 - according to the project design, insert thermal insulation between the elements of the load bearing structure of the ceiling (coefficient of diffusion resistance of thermal insulation in the range 1-5 and the fire response category A1 - A2)
- anchoring of the wooden grating in the thickness of 24 mm:
 - on a horizontal load bearing structure designed for a ceiling, level and anchor the wooden grating of a min. of 24/120 mm using EP 5x80 mm screws with pre-drilling, always 2 screws / joint
 - be sure to maintain 400 mm of spacing between the gratings
- EKO1 – E40 ceiling cladding:
 - apply a low-expansion installation foam to the contact area of the wooden grating at the location of the laying of the Ekopanely board
 - insert the Ekopanely board into the prepared place parallel lengthwise to the wooden grating, place the Ekopanely board so that the facework requirement of board placement is adhered to (↓ TOP ↓)
 - screw the Ekopanely board flatly into the wooden grating using EP 5x70 mm screws with EP-P1 washers (without pre-drilling and plastic wall plugs) at a density of 9 screws / 1 m²
 - apply low expansion installation foam to the contact surface of the wooden grating at the location of the placement of the next Ekopanely board and to the entire free edge of the anchored Ekopanely board
 - screw the second Ekopanely board in the elongation of the previous one using EP 5x70 mm screws with EP-P1 washers (without pre-drilling and plastic wall plugs) at a density of 9 screws / 1 m²

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- systematically repeat the installation procedure to the end of the surface of the ceiling, where the last panel width is modified as needed
- any gaps can be sealed up by inserting compression insulating tape or low-expansion installation foam
- the individual series of Ekopanely boards must be overlapped length-wise so as to bind them at least 1/3 of the length of the board in order to avoid a continuous joint
- repeat the assembly procedure systematically up to the other end of the perimeter wall, where the last panel is width-adjusted as needed

- note:

- application can be considered without PUR foam - it is necessary to consult with the building system supplier

Installation tools

- hand-held circular saw
- jig saw
- drill
- hole saw (jig-borer)
- cordless drill/driver
- pistols for PUR foam
- jack for Ekopanely boards
- hook for carrying Ekopanely boards

Consumption and a description of fasteners

Ceiling EKO1 - E40 10 m²	
MATERIAL DESCRIPTION	AMOUNT
Wooden grating 24/120 mm	30 LM
Screw EP 5x80 mm (with pre-drilling)	84 pcs
Screw EP 5x70 mm	90 pcs
Washer EP-P1	90 pcs
Thermal insulation	10 m ²
Ekopanely E40	10 m ²
Self-adhesive tape SP 75	1 pc/50 m ² according to the number of cuts
Mounting foam 750 ml	yield 1 pc/20 m ²