

BEWI Jackodur® PLUS 300

Technical Datasheet

Flat Roof Insulation – Protected Membrane Roofs

BEWI Jackodur® PLUS 300 Inverted Roof Insulation is made of extruded polystyrene foam (XPS) delivering outstanding insulation characteristics with a declared (λ_p) 0.027 W/mK, thereby promoting sustainable and energy-efficient building design.

The insulation boards are loose laid over the weatherproofing, there is no requirement to adhere or mechanically fix the boards. BEWI Filter Membrane (WFRL) is laid over the insulation. Finally, a suitable finish is applied to secure the insulation to the deck.

XPS is compatible with and can be laid directly onto hot melt and bitumen based weatherproofing membranes.

BEWI Jackodur® PLUS 300 Inverted Roof Insulation is manufactured in accordance with BS EN 13164 under a Quality Assurance System approved to ISO 9001 and Environmental Management System to ISO 14001.

The system is a lightweight and easy to install solution. There are no requirements for special PPE when installing or cutting the insulation boards.

Key Benefits

- BBA Certified (21/5944 PS3)
- Thicknesses from 50mm up to 320mm
- Installed quickly and securely in a single-layer
- Suitable for zero fall roofs and roof terraces
- Applicable to new and existing buildings
- High compressive strength
- Resistant to the effects of freeze/thaw

U-Values

Typical U-values

The table shows the thickness of BEWI Jackodur® PLUS 300 Inverted Roof Insulation and the U-Values that can be achieved down to 0.09 W/m²K.

Thickness (mm)	50*	60*	80	100	120	140	160	180	200	220	240	260	280	300	320
U-Value (W/m ² K)	0.51	0.43	0.34	0.27	0.22	0.19	0.17	0.15	0.14	0.12	0.11	0.11	0.10	0.09	0.09

* 50 and 60mm are not included in the BBA Certificate.



Dimensions

Size	1250 × 600 (with 15mm rebated edges) Board coverage 0.75m ²
Thickness	Single thickness 50mm up to 320mm (in 20mm increments)

The calculation is based on corrected thermal conductivity and an inverted roof construction of 150mm reinforced concrete deck, hot melt waterproofing, BEWI Jackodur® PLUS 300, BEWI Filter Membrane, drainage factor $f_x = 0.001$ and an average rate of precipitation (P) ≤ 3.000 (mm/day).

For more information:

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Properties

	Standard	Jackodur® PLUS 300 Standard															
		50	60	80	100	120	140	160	180	200	220	240	260	280	300	320	
Thickness mm																	
Corrected Thermal Conductivity (W/mK) (m ² ·K/W)	BS EN 13164	0.029				0.028											
Thermal resistance (W/mK)	BS EN 13164	1.70	2.05	2.75	3.55	4.25	5.00	5.70	6.40	7.10	7.85	8.55	9.25	10.00	10.70	11.40	
Water vapour diffusion resistance factor μ	BS EN 12086	≥50															
Long term water absorption by diffusion WD(T) (Vol %)	BS EN 12088	≤ 3		≤ 2						≤ 1							
Compressive stress at 10% deformation or compressive strength	BS EN 826	300															
Reaction to fire (Euroclass)	BS EN 13501-1	E															
Long term water absorption by immersion, WL(T) (Vol %)	BS EN 12087	≤ 0.7															
Freeze-thaw cycle durability, FTCD (Vol %)	BS EN 12091	1															
Dimensional stability at 70°C and 90% rel. humidity, DS(70/90) (%)	BS EN 1604	≤ 1															
Deformation under 40 kPa pressure at 70°C temperature, DLT(2)5 (%)	BS EN 1605	≤ 5															
Application temperature limits (°C)		-50 to +75															
Capillarity		none															
Surface quality		smooth															
Edge definition		shiplap															

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Accessories

BEWI Filter Membrane

The BEWI Filter Membrane (WFRL) is a breathable, non-woven polypropylene flexible membrane supplied as part of the Inverted Roof Insulation System to minimise water flow below the insulation which might lead to potential heat loss.

BEWI Filter Membrane also acts as a filter layer reducing the migration of fines and other debris from the layers above.

Dimensions

Roll Length	300 m
Roll Width	3m
Water Vapour Resistance To BS EN ISO 12572 (MNs/g)	0.02 MNs/g

Accreditation

BBA	BEWI Jackodur® PLUS 300 boards have been tested and approved for use in inverted roofs with pedestrian traffic and terraced roof constructions with zero pitch and slopes up to 10°. See BBA Certificate number 21/5944 PS3 for further information on application and finishes.
NHBC	If installed, used and maintained in accordance with the BBA Certificate, BEWI Jackodur® 300 Plys Inverted Boards can satisfy or contribute to satisfying the relevant requirements in relation to NHBC Standards, Chapter 7.1 Flat Roofs.
UKCA marking	BEWI have taken the responsibility of UKCA marking the product in accordance with harmonised European Standard BS EN 13164. Declaration of Performance is available on request.
Quality	All BEWI products are manufactured in production facilities which are certified to ISO 9001 Quality Management.
Environmental Responsibility	All BEWI manufacturing facilities are ISO 14001 certified. We operate an Environmental Management System which includes our supply chain.
Compliance	BEWI Jackodur® 300 PLUS Inverted Roof Insulation conforms to the required properties as defined in BS EN 13164 - Thermal insulation products for buildings – Factory made extruded polystyrene (XPS) products – Specification.

Disclaimer: Every effort has been made to ensure the correctness of the information provided in this data sheet and is based on data and knowledge accurate at the time of production. It is designed for experienced professionals in the building and construction industry and does not offer a complete overview of industry practices. Therefore, this cannot guarantee the performance results, as usage and installation conditions are outside our control. If you have any questions regarding the suitability of the application, please contact us.

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