BEWI Jackodur® EVO 300

Technical Datasheet

Flat Roof Insulation – Protected Membrane Roofs

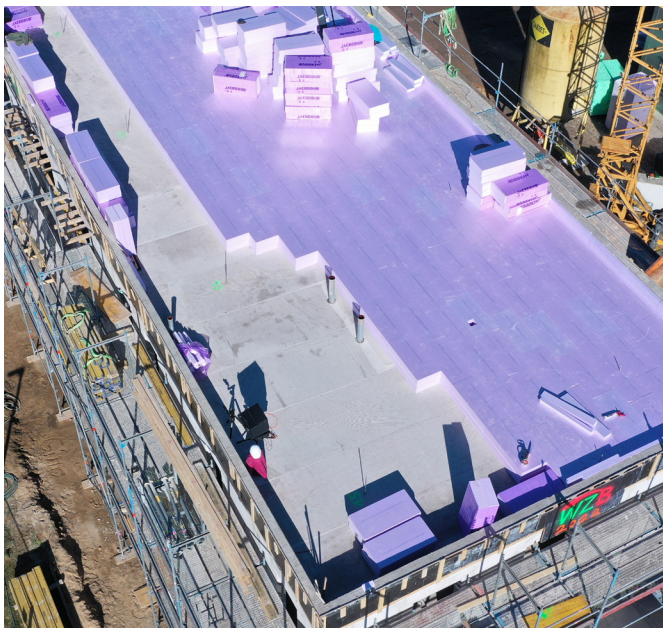
BEWI Jackodur® EVO 300 Inverted Roof is the new generation of extruded polystyrene foam (XPS) using CO2 and multilayer manufacturing technologies delivering insulation characteristics with a declared (λ_D) 0.032 W/mK.

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® EVO 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.



BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 21/5944

Key Benefits

- BBA Certified (21/5944 PS4)
- Thicknesses 40 - 400mm
- 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

Dimensions

Size	1250 × 600 (with 15mm rebated edges) Board coverage 0.75m^2
Thickness	Single thickness 40, 50 & 60mm up to 400mm (in 20mm increments from 60mm)

U-Values

Typical U-values

The table shows the thickness of BEWI Jackodur® EVO 300 Inverted Roof Insulation and the U-Values that can be achieved down to 0.09 W/m^{2}K.

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

Thickness (mm)	40	50	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400
U-Value (W/m^{2}K)	**0.73**	**0.60**	**0.51**	**0.39**	**0.32**	**0.27**	**0.23**	**0.20**	**0.18**	**0.16**	**0.15**	**0.14**	**0.13**	**0.12**	**0.11**	**0.10**	**0.10**	**0.10**	**0.09**	**0.09**

For more information:
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Properties

		Jackodur® EVO 300																		
Thickness (mm)		**40**	**50**	**60**	**80**	**100**	**120**	**140**	**160**	**180**	**200**	**220**	**240**	**260**	**280**	**300**	**320**	**340**	**360**	**380**	**400**
Corrected Thermal Conductivity (W/mK) (m^2·K/W)	BS EN 13164	0.035				0.034															
Thermal resistance R_D (W/mK)	BS EN 13164	1.15	1.45	1.75	2.35	2.90	3.50	4.10	4.70	5.25	5.85	6.45	7.05	7.60	8.20	8.80	9.40	10.00	10.55	11.15	11.75
Vapour diffusion resistance factor μ	BS EN 2086	160	140	130	120	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
Water absorption through diffusion, WD(V) (vol %)	BS EN 12088	≤ 3																			
Permanent compressive strength creep behaviour (50 years, compression < 2%) (kPa)	BS EN 826	300																			
Compressive creep (50 years, deformation < 2%) (kPa)	BS EN 1606	–																			
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	≤ 5																			
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® EVO 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 EVO 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 EVO 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.

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