



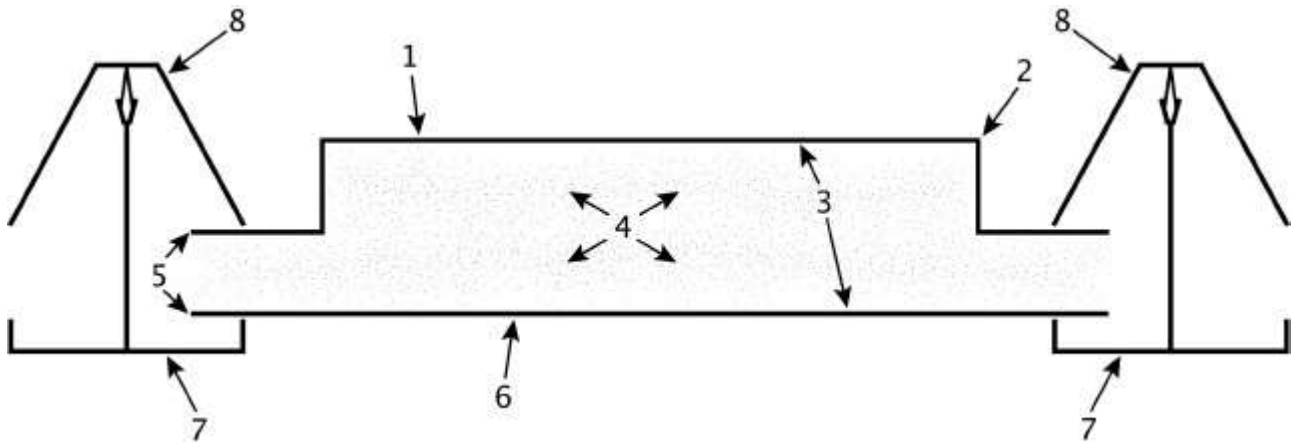
THERMOTEC
ROOFING SYSTEMS LIMITED



Thermotec Insulated Roof Panel Data Sheet

General Specification:

A Thermotec Insulated Roofing Panel consists of the following components.



Thermotec lightweight insulated panel glazed into existing roof structure.

1. Polyester powder weather / colour coating (external)
2. 2mm aluminium folded and welded tray
3. Adhesive applied to insulation and aluminium (Chemique XP 2411)
4. STYROFOAM™ LBH-X-P
5. 2mm flat aluminium
6. Polyester powder colour coating (internal)
7. Existing aluminium rafter bar
8. External PVC-u glazing cover cap

Product Breakdown:

Aluminium

Low strength, high corrosion resistance, high thermal and electrical conductivity, easy to form and weld, excellent corrosion behaviour under normal weather conditions.

Physical Properties:

Density	2.81g/cm ³
Modulus of elasticity	69,000 N/mn ²
Co-eff thermal expansion	23.6 x 10 ⁻⁶ K ⁻¹
Thermal conductivity	210-230 W/mK
Melting range	645-657 °C

Source: Alcan Alloy Data Sheet ref 1050A

Adhesive

A sprayable contact adhesive used for general bonding of metal, plastics and insulation materials. High grade polychloroprene based sprayable adhesive which combines excellent resistance to creep at high temperatures with good flexibility at very low temperatures. General purpose sprayable contact adhesive.

Physical Properties:

State	Liquid
Colour	Green
Odour	Perceptible odour
Solubility	Reacts with water

Source: www.chemique.co.uk data sheet XP2411 XP2523

Thermal Panel Properties

Fully bonded panel with high strength to weight properties. CDC formed aluminium trays are bent to site specific measurements. Panels formed with welded corner joints to increase strength, then powder coated to preferred colour. Insulation bonded to aluminium trays and panel final contact adhesive assembled. Final tongue joint sealed with vapour control tape, panel tongue sized to fit existing glazing bar.

Physical Properties:

Density	12.2Kg/m ² based on 75mm panel using 2mm aluminium sheets
U-Value	0.29 W/mm ² based on average 75mm panel depth
Colour	Powder coated to match existing framing design or client preference
Size	Panel sizes manufactured to site surveyed measurements
Thickness	Panel thickness to suit depth of existing glazing bars and aesthetical appearance

STYROFOAM™ LBH-X-P

Produced by Dow Building Solutions, a lightweight foamed product that has uniformly closed cells and a smooth surface texture with low thermal conductivity properties.

Physical Properties:

Properties	Standard	Unit	STYROFOAM™ LBH-X	CE-Code
Cell content			HFC	
Density (typical value)	EN 1602	kg/m ³	33	-
Thermal conductivity declared (λ_D)	EN 13164	W/(m.K)	0,033	λ_D
Compressive stress or compressive strength @ 10% deformation ¹⁾	EN 826	kPa	300	CS(10\Y)
Tensile strength ¹⁾	EN 1607	kPa	500	TR
Shear strength	EN 12090	kPa	250	SS
Moduli (typical values)				
E-Modulus ¹⁾	EN 826	MPa	12 (≤ 30 mm) 15 (31-80mm) 20 (> 80 mm)	-
Tensile modulus ¹⁾	EN 1607	MPa	24 (≥ 50 mm)	-
Shear modulus G	EN 12090	MPa	10	-
Water vapour diffusion resistance factor μ (tabulated value)	EN ISO 10456	-	150	MU
Long term water absorption by total immersion	EN 12087	Class	1,5	WL(T)
Dimensional stability under specified temperature (70°C) and humidity conditions (90%rh)	EN 1604	%	5	DS(70,90)
Capillarity	-	%	0	-
Coefficient of linear thermal expansion (typical value)	-	mm/(m.K)	0,07	-
Reaction to fire Euroclass	EN 13501-1	-	E	-
Temperature limits	-	°C	-50/+75	-
Dimensions ²⁾				
Thickness	EN 823	mm	20-200	-
Width	EN 822	mm	600/1200	-
Length	EN 822	mm	2500/3000	-
Tolerances				
Thickness	EN 823	mm	-/+0,5	T
Width	EN 822	mm	<700mm: -0/+3 ≥ 700 mm: -0/+5	-
Length	EN 822	mm	-0/+10	-
Edge Profile	-	-	butt edge	-
Surface Finish	-	-	planed/grooved	-

Designation code: XPS – EN 13164 – T3 – CS(10\Y)300 – DS(70,90) – WL(T)1,5 – TR400 – SS250



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