



Polyfoam Fabrication Boards

Description

Polyfoam fabrication boards are high performance, 100% ozone friendly, extruded polystyrene, rigid insulation board. They are all lightweight, yet have excellent structural strength and long term effectiveness.

Polyfoam fabrication boards are all straight edged and have keyed surfaces to suit lamination.

Application

There are four Polyfoam fabrication products to suit a range of intended end uses:

- **Polyfoam General Application Laminate** – for thermal and structural insulation and use as a fabrication block for all types of manufacturing
- **Polyfoam Laminating Board** – for general fabrication and panel manufacture, for use as both a thermal and structural solution
- **Polyfoam Panelboard** – for fabrication and panel manufacture where the surface material is fine and the end use of the panel requires a 'flat' aesthetic appearance. Polyfoam Panelboard can be used as both a thermal and structural solution
- **Polyfoam RVB** – for fabrication and panel manufacture especially in refrigerated vehicles, where strength and thermal performance are important – can also be used as both a thermal and structural solution in other types of construction where a higher grade material than Polyfoam Laminating and Panelboard is required

The choice of appropriate fabrication board depends on the expected loading, position of the material and the thickness of the panel's surface finish material. Consult the Knauf Insulation Technical Advisory Centre for further details.

Performance

Thermal

Polyfoam fabrication boards have thermal conductivities ranging from 0.030 to 0.031 W/mK – see product table overleaf.

Benefits

- Strong and rigid insulation
- Structurally stable in the long term
- Manufactured to close tolerances
- Lightweight and easy to use
- Huge range of potential applications
- Can be formed, cut, routed into specific component forms



Product Data

Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m ² K/W)	Surface tolerance (mm)	Nominal density (kg/m ³)	Minimum compressive strength (KPa)	Length (mm)	Width (mm)
General Application Laminate							
75	0.030	2.90	± 0.5	30	200	2400	600
50	0.030	1.65	± 0.5	30	200	2400	600
25	0.030	0.85	± 0.5	30	200	2400	600
Laminating Board							
50	0.030	1.65	± 0.5	30	200	2400	1200
45.5	0.030	1.50	± 0.5	30	200	2400	1200
36	0.030	1.20	± 0.5	30	200	2400	1200
30.5	0.030	1.00	± 0.5	30	200	2400	1200
25	0.030	0.85	± 0.5	30	200	2400	1200
20	0.030	0.65	± 0.5	30	200	2400	1200
17.5	0.030	0.55	± 0.5	30	200	2400	1200
Panel Board Various sizes available							
From 5m to 50mm*0.031		-	± 0.25	30	200	on application	
Refrigerated Vehicle Board (RVB)							
75	0.031	2.40	± 0.5	35	350	2400	600
50	0.030	1.65	± 0.5	35	350	2400	600

All dimensions are nominal

As the material is often viewed as a component the tolerances need to be specified, both on thickness and dimensions, to ensure optimum suitability.

The following range of applications are some of the key areas of use of Polyfoam fabrication boards:

- General panels (plasterboard, chipboard, cement boards etc.)
- Close tolerance panels (doors, steel faced etc.)
- Refrigerated vehicles

Standards

Polyfoam fabrication boards are manufactured in accordance with BSI Quality Assurance Standard BS EN ISO 9001: 2000.

Durability

The continuous service temperature limits of Polyfoam fabrication boards are -50 to +75° C.

Environmental

Polyfoam fabrication boards are free from CFCs, HCFCs and any other material with ozone depletion potential in their manufacture and content and represent no known threat to the environment. Polyfoam fabrication boards are non bio-degradable.

Polyfoam fabrication boards are 100% recyclable.

Compression resistance

Polyfoam General Application Laminate, Laminating Board and Panel Board are highly resistant to compression and withstand both occasional and long term static loads. For higher loads Polyfoam RVB can be used.

Strength

Product	Shear strength KPa	Tensile strength KPa	Shear modulus KPa	Tensile modulus KPa
Laminating Board	200	600	2000	28000
Panel Board	200	700	2000	28000
RVB	200	700	2000	28000

Moisture resistance

The Polyfoam fabrication boards are resistant to moisture absorption and can be installed in standing water, high humidity factory conditions or up against wet surfaces with negligible impact on the performance of the product.

Fire Performance

Polyfoam General Application Laminate contains a fire retardant to inhibit localised ignition, but must not be exposed to ignition sources or naked flames. When installed as a component behind, and encapsulated in fire rated surfaces it will not present an undue fire hazard.

Handling and storage

The boards are easy to handle and non-irritant, no special protective clothing is required when installing them.

Polyfoam Laminating Board and Panel Board are supplied on pallets, Polyfoam General Application Laminate and RVB are supplied in polythene packs, all products are labelled with identifying product and manufacturing data.

Ensure the boards are not stored close to open flame or other ignition source, also avoid volatile compounds and chemicals such as solvents.

Polyfoam products should not be left exposed to prolonged sunlight as this will result in surface degradation. Where outside storage for extended periods is required cover with opaque/light coloured sheeting.

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