

Standard PIR Panel Specification



Isoclad *PIR*

The multi-purpose insulated panel system for any environment



Isoclad PIR

Standard Panel Specification

Isoclad manufacture a range of insulated and fire-resisting panels which can be used for wall systems, horizontally or vertically and ceilings. All panels are manufactured to an ISO 9001:2008 quality assurance system.

The PIR panel has a Polyisocyanurate core. Manufactured from MDI Polyols and blowing agent (ODP Zero + GWP less than 5) to produce highly crosslinked polymers. This closed cell foam has an excellent thermal performance, good shear and tensile strength and is very lightweight. These benefits make our panels ideal for freezers, chill store and areas of high humidity.

PIR LPC

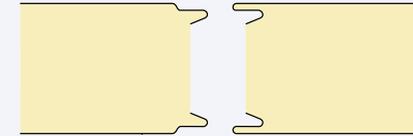
Lightweight fire rated non-combustible panels designed for internal linings and partitions for general industrial applications and low temperature environments.

PIR has a density of 40kg fully cured sanded and de-dusted, extremely square and flat full boards of specified thickness.

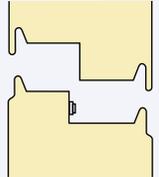
Joint Detail

Roll formed to create the male/female inter-locking joint.

Intaloc



Secret Fix



Profiles (NOT TO SCALE)

Flat

Laminated panel produces a much flatter surface than other manufacturing methods, but 'optical' flatness is not assured; some shadowing might be evident in certain lighting situations.



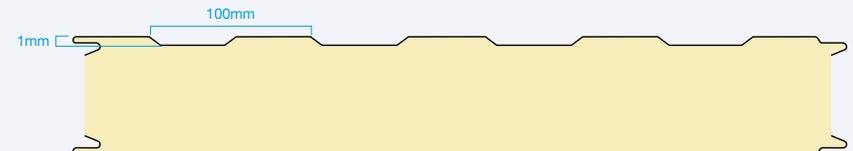
V-Rib

(Pitch 200mm - 5 per panel)



Castellation

(Pitch 100mm)



Micro rib

(Pitch 30mm - 1 side only)



Vertical

Fire Ratings & Maximum Recommended Span (m)

Panel	Thickness (mm)	Fire Resistance (mins)		Max Unsupported Span (m)	
		Integrity	Insulation	LPS 1208	BS476 Part 22
PIR Walls (Stitched)	100	46	41	3.00	-
	150	30	30	6.00	-
	150	60	30	4.00	-

Ceilings

Fire Ratings & Maximum Recommended Span (m)

Panel	Thickness (mm)	Fire Resistance (mins)		Max Unsupported Span (m)	
		Integrity	Insulation	LPS 1208	BS476 Part 22
PIR Ceilings	150	82	50	3.40	-

Structural Walls

Maximum Recommended Span (m)

Core Thickness	50	75	100	125	150	175	200
PIR	5.8	7.9	10.0	10.4	10.8	11.3	11.8

Structural Ceilings

Maximum Recommended Span (m)

Core Thickness	50	75	100	125	150	175	200
PIR	4.4	5.2	6.0	6.7	7.5	8.3	9.2

Panel Weight Kg/m²

Core Thickness	40	50	75	100	125	150	175	200
PIR	9.7	10.0	11.0	11.9	12.9	13.8	14.8	15.7

Panel Weights in kg/m² based on 0.5 thickness steel

Add 1.1 kg/m² for ceiling or 0.7 panels

Thermal Properties

Insulation Materials	Thermal Conductivity W/m ² c	40	50	75	100	125	150	175	200	Recommended Minimum Thickness for U Values 0.35 W/m ²
PIR	0.022	0.55	0.44	0.29	0.22	0.18	0.15	0.13	0.11	60mm

External/Internal facing finishes

We offer a complete range of facings available in 0.5mm and 0.7mm hot dipped galvanized substrate with the following finishes.

WFSL	HP200	PVF2	HPSULTRA	Polyester	Primer
120 micron thick White Food Safe Laminate for internal hygienic area	Colour coat leathergrain, A 200 micron PVC paint system with leathergrain emboss, available in various colours	Colour coat smooth 27 micron poly vinyl di fluoride stoved fluorocarbon, available in various colours	Colour coat Scintilla, organic coated 200 microns Scintilla, emboss of 40 microns. Available in various colours	Standard white 25 micron painting system consisting of primer and polyester finish. Other colours upon request.	7 to 12 micron coat of epoxy

Maintenance

Walls can be washed down with fresh water from a hose or bucket. A solution of fresh water and Tepol or non aggressive detergent, which contains dilute ammonia, may be used to remove heavy deposits from walls, followed by a fresh water rinse.

Water Temperature should not exceed 60°C with a maximum pressure of 1000lbs per square inch.

Stubborn oil or grease stains can be easily removed with white spirit on a soft cloth, followed by an immediate fresh water rinse.

Solvents, cleaners containing abrasives and cleaners in strong concentrations should not be used. Over-cleaning or scrubbing can do more harm than good.

To allow regular washing of panels, it is important that both the design and maintenance of the panel system should prevent moisture collecting in crevices and joints. This is particularly important at the bottom of wall panels, where pollutants from cleaning solutions or from floor soil can cause corrosion problems. This can be achieved by a design which ensure that the edges are folded back and by sealing the edges with a neutral curing silicone sealant.

Disclaimer

While Isoclad can give advice regarding suitability for end use it remains the responsibility of the client/architect/specifier to ensure the panels are selected and installed according to the latest regulations and fire safety requirements and that they are suitable for their intended use.

ISO/PIR/spec/03/15

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Isoclad Ltd

10 Alder Road, West Chirton North Industrial Estate,
North Shields, Tyne & Wear NE29 8SD. UK

Tel: +44 (0) 191 258 5052

Email: sales@isoclad.co.uk

www.isoclad.co.uk

