Isowall Groupi

Providing sustainable value since 1973

Polyisocyanurate (PIR) Core Panel

Isowall's PIR cored panels are made from a flexible faced PIR board made on a continuous laminator.

Besides being a high insulating material, PIR is also CFC free.

Even though PIR is not non-combustible, it does not burn in the same way as other foams such as polystyrene.

PIR is a thermoset whilst polystyrene is a thermoplastic.

PIR when subject to fire forms a carbonaceous layer which retards further flame spread and penetration but being an organic compound will eventually burn.

Technical Data

Performance of the panel varies with thickness and the following table gives recommended usage limits

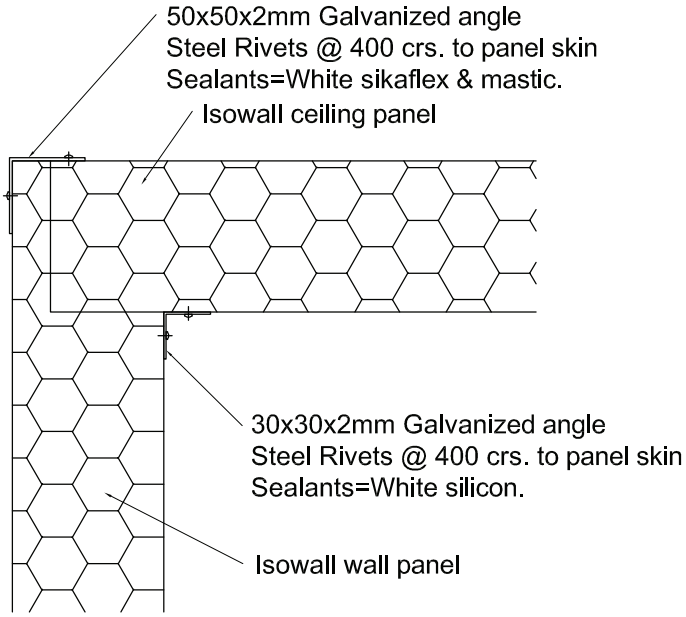
Span data for PIR (Polyisocyanurate) panels:

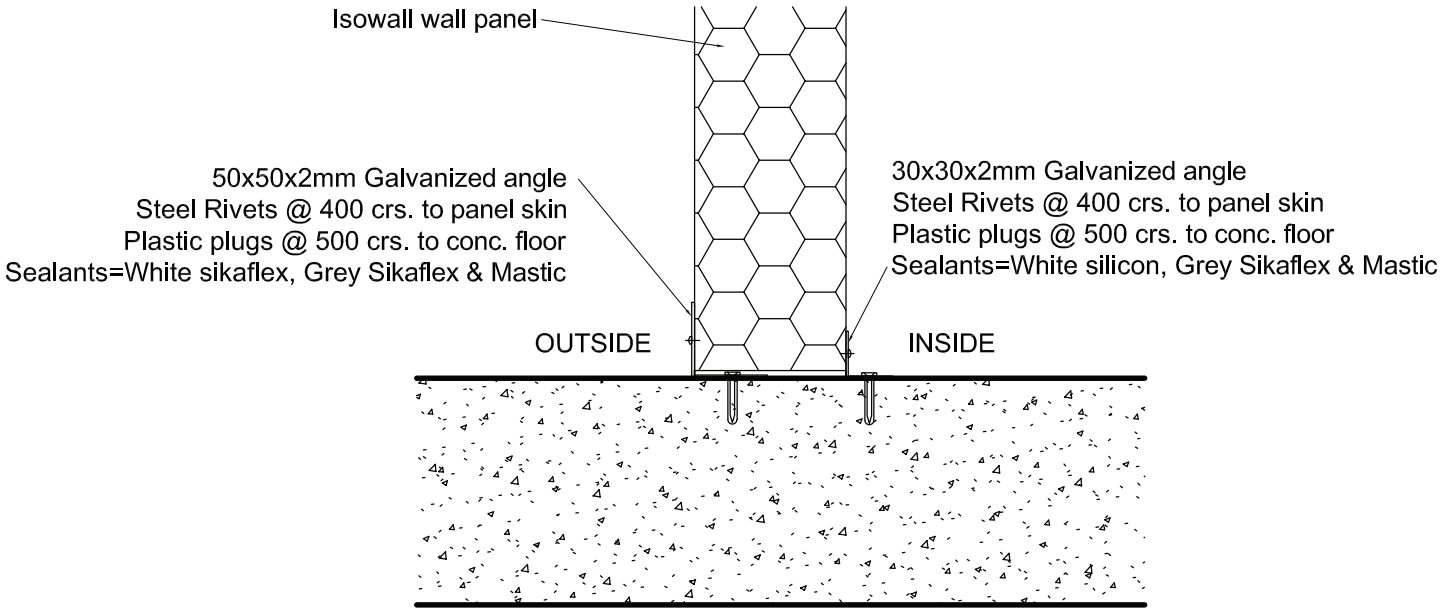
Core Thickness (mm)	Max. Unsupported Wall Height (mm)	Max Unsupported Ceiling Length (mm)	'U' Value ($W/m^2.K$)	'R' Value ($m^2.K/W$)	Panel Weight (0.5mm coil) (kg/m^2)
50	4500	3000	0.44	2.27	11
75	6000	4500	0.27	3.70	12
100	7000	5600	0.22	4.54	13
125	8000	6700	0.18	5.55	14
150	10000	7800	0.15	6.66	15
200	12000	10000	0.11	9.09	17

All maximum ceiling spans must be reduced by 25% if exposed to direct sunlight.

Typical properties of PIR

Physical Property	Unit	PIR
Core density (overall)	Kg/m^3	40
Aged thermal conductivity	w/m.^oC@ 22^oC	0.024
Compression strength	kPa	130-200
Co-efficient of linear expansion	mmk x 10-6	40-60
Closed cell content	%	95
Operating Temperature limits	^oC	120 ^oC
Temperature Range	^oC	-30 to 120 ^oC
Blowing agent		Hydrocarbons





Isowall
Isowall Southern Africa (Pty) Ltd
Reg. No. 1982/010393/07

TITLE :

FIXING MAT'L USED FOR PIR PANELS

DRAWING NO :

ISO DWG DET 025

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