

**ISOPLAN PIR is an insulating and waterproofing roofing board that made of a flat (or cut-in) rigid Polyisocyanurate (Polyiso) board lined with either glass fibre, a bituminous paper felt or a multilayer lining, torch-bonded in a factory controlled environment to a polymer-modified bituminous waterproofing membrane**

#### Production Range

ISOPLAN PIR is available with a glass fibre lining (RF7 Boards); a bituminous paper felt lining (RF2 Boards) or a multilayer lining (RF6 Boards) torch-bonded to an APP- or an SBS- polymer modified bituminous waterproofing membrane of choice for type of carrier, thickness or unit weight and surface finish (see technical data overleaf).

#### Main applications

Thermal insulation and base sheet waterproofing base sheet of most civil and industrial flat roofs and other constructions.

It can be installed in multi-layer constructions for roofs with exposed waterproofing layers, with heavy duty protection, ballasted flat roofs, parking decks as well as roof gardens, pitched roofs, sheds, or prefab r.c. roofing elements.

#### Specification wording

The insulation and the waterproofing base sheet will consist of a layer of ISOLPARMA ISOPLAN PIR combining a flat (or cut-in) rigid PIR (Polyiso) foam board (type RF2; RF6 or RF7 ) ... mm thick, and a polymer bitumen membrane (type ) .....

#### Sizes and packaging

ISOPLAN PIR boards are available in a standard size of 100 cm x 200 cm.

The boards have a head and side selvedge that may vary from 5 to 10 cm.

On request cut-in boards can be supplied with a width up to 120 cm and variable length up to 400 cm, with head, tail and one-side selvedge  
ISOPLAN PIR boards are delivered wrapped with PE on pallets. Pallet quantities vary with the thickness of the insulation material (see table).

PIR Thickness mm	Boards per pallet
30	39
40	30
50	24
60	20
80	15
100	12
120	10

## ISOPLAN PIR

#### Main applications



Flat roofs with exposed waterproofing layer



Ballasted or paved flat roofs



Car parks and ramps



Roof gardens



Pitched roofs below tiles or slates



Shed roofs



Prefabricated R.C. roof elements

#### CE marking

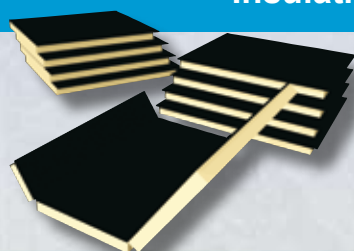


Polyisocyanurate Foam Insulation (PIR)



Polymer Bitumen Membrane

Laboratory tests have compared the thermal transmittance values of standard flat boards, of rolls of scored boards and of cut-in boards. When correctly installed, all three types show comparable values except for minor variations.


**TECHNICAL DATA SHEET OF THE PIR BOARD**

CE UNI EN 13165

Properties	Code	Norm	Description	PIR			Unit	
				RF7	RF2	RF6		
Density				30 - 35	30 - 35	30 - 35	kg/mc	
Declared heat conductivity	$\lambda_D$	UNI EN 12667	value measured at a mean temperature of 10 °C	≤ 0,028	≤ 0,028	≤ 0,025	W/mK	
Declared heat resistance	$R_D$	UNI EN 12667	related to thickness $R_D = d/\lambda_D$	mm 20	0,71	0,71	0,80	(m <sup>2</sup> K)/W
				mm 30	1,07	1,07	1,20	
				mm 40	1,43	1,43	1,60	
				mm 50	1,79	1,79	2,00	
				mm 60	2,14	2,14	2,40	
Resistance to compression	CS (10/Y)	UNI EN 826	compression to 10% of thickness	mm 20	160	150	160	KPa
				mm 30	150	150	160	
				mm 40	150	160	160	
				mm 50	160	165	160	
				mm 60	160	165	160	
Dimensional Stability	DS(TH)	UNI EN 1604	48 h a 70 °C e 90 % RH				%	
			Linear variation		1	1		1
			Variation in thickness	mm 20, 30	6	7		6
				mm 40	5	6		5
				mm 50	4	4		4
				mm 60	3	4		4
			48 h a -20°C					
Linear variation		0,5	0,5	0,5				
Variation in thickness		1	1	1				
Fire Reating	euroclasse	UNI EN 13501-1		E	F	E		
Specific heat				0,400	0,400	0,400	kcal/kg°C	
Water absorption	WL(T)	UNI EN 12087	Total immersion for 28 days	≤ 2	≤ 2	≤ 2	% volume	
Resistance water vapour diffusion	MU	UNI EN 12086		350	350	350	μ	

**NOTES:**

Temperature Stability: Isolparma Rigid Foam Boards are suitable for use within a range of continuous temperatures between -40 °C and + 110 °C. For very short periods of time they can also withstand without any problems temperatures up to + 200 °C, or the temperatures of molten bitumen. Long exposure to high temperatures may cause deformations of the foam or of the facing materials, but will not cause sublimation or melting.

**TECHNICAL DATA SHEET OF THE POLYMER BITUMEN MEMBRANES**

 UNI EN 13707  
 UNI EN 13859-1

Properties	Norm	Description	TYPES OF MEMBRANE AND CARRIERS										Unit
			APP VV	APP VV	APP PE	APP PE	APP PE	APP PE	APP PE Min	APP PE Min	APP PE Min	SBS PE	
Mass	UNI EN 1849-1		2	3	-	-	3	4	3,5	4	4,5	3	Kg/m <sup>2</sup>
Thickness	UNI EN 1849-1		-	-	3	4	-	-	-	-	-	-	mm
Tensile Strength	UNI EN 12311-1	Longitudinal	300	300	400	400	400	400	400	400	400	400	N/5 cm
		Transversal	200	200	300	300	300	300	300	300	300	300	
Elongation at break	UNI EN 12311-1	Longitudinal	2	2	35	35	35	35	35	35	35	35	%
		Transversal	2	2	35	35	35	35	35	35	35	35	
Tear resistance	UNI EN 12310-1	Longitudinal	70	70	130	130	130	130	130	130	130	130	N
		Transversal	70	70	130	130	130	130	130	130	130	130	
Cold flexibility	UNI EN 1109		0	0	-5	-5	-5	-5	-5	-5	-5	-10	°C
Heat resistance	UNI EN 1110		110	110	110	110	110	110	110	110	110	90	°C

APP = Atactic Polypropylene ; SBS = Styrene butadiene styrene; VV = glass fibre reinforcement; PE = polyester reinforcement; MIN = slate finish

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