

**ISOPLAN EPS is an insulating and waterproofing roofing board made of a flat (or cut-in) rigid EPS board torch-bonded in a factory controlled environment to a polymer-modified bituminous waterproofing membrane**

#### Production Range

ISOPLAN EPS is available in different classes of insulating material (EPS 80, EPS 100, EPS 150 and EPS 200) 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 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 will consist of a layer of ISOLPARMA ISOPLAN EPS combining a flat (or cut-in) Class ...EPS board ... mm thick, and a polymer bitumen membrane (type) .....

#### Sizes and packaging

ISOPLAN EPS 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 EPS boards are delivered wrapped with PE on pallets. Pallet quantities vary with the thickness of the insulation material (see table).

EPS Thickness mm	Boards per pallet
30	39
40	30
50	24
60	20
80	15
100	12
120	10
150	8

## ISOPLAN EPS

#### Main applications



Pitched roofs below tiles or slates



Ballasted or paved flat roofs



Car park and ramps



Roof gardens



Shed roofs



Prefabricated R.C. roof elements

#### CE marking

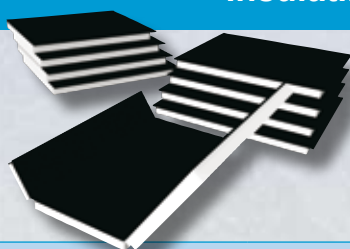


Polystyrene Foam Insulation (EPS)



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 EPS BOARD**

UNI EN 13163

Properties	Code	Norm	Description	EPS Classes				Unit	
				80	100	150	200		
Density				16 - 18	19 - 20	25	30 - 32	kg/mc	
Declared heat conductivity	$\lambda_D$	UNI EN 12667	value measured at a mean temperature of 10 °C	$\leq 0,037$	$\leq 0,035$	$\leq 0,034$	$\leq 0,033$	W/mK	
Declared heat resistance	$R_D$	UNI EN 12667	related to thickness $R_D = d/\lambda_D$	mm 30	0,81	0,86	0,88	0,91	(m <sup>2</sup> K)/W
				mm 40	1,08	1,14	1,18	1,21	
				mm 50	1,35	1,43	1,47	1,52	
				mm 60	1,62	1,71	1,76	1,82	
Resistance to compression	CS(10/Y)	UNI EN 826	compression to 10% of thickness	$\geq 80$ CS(10)80	$\geq 100$ CS(10)100	$\geq 150$ CS(10)150	$\geq 200$ CS(10)200	KPa	
Resistance to flexibility	BS	UNI EN 12089		$\geq 125$ BS 125	$\geq 150$ BS150	$\geq 200$ BS 200	$\geq 250$ BS 250	KPa	
Dimensional stability	DS(N)	UNI EN 1603	test conditions (23 °C - 50% U.R.)	$\pm 0,5$ DS (N) 5	$\pm 0,5$ DS (N) 5	$\pm 0,5$ DS (N) 5	$\pm 0,5$ DS (N) 5	%	
Fire rating	euroclasse	UNI EN 13501-1		E	E	E	E		
Specific heat		UNI EN 12524		1450	1450	1450	1450	J/(KgK)	
Resistance to water vapour diffusion	MU	UNI EN 12086		30-70	30-70	30-70	40-100	$\mu$	
Water absorption	WL(T)	UNI EN 12087	total immersion for 28 days	$\leq 3$ WL(T) 3	$\leq 3$ WL(T) 3	$\leq 3$ WL(T) 3	$\leq 3$ WL(T) 3	% volume	
Thickness tolerance				75	75	75	75	°C	

**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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