isolparma
RIGID FOAM

Insulating and Waterproofing Roofing Boards

MISTRAL XPS

MISTRAL XPS is a ready-made insulated roofing element designed for ventilated roofs, consisting of an Extruded Polystyrene board bonded with spacers to an Oriented Strand Board panel type OSB3 suitable for structural use in damp environments.

Production range

MISTRAL XPS is available with a standard 12mm OSB3 board.
On request MISTRAL XPS can be supplied with 9mm OSB3 board, with Plyword or other wooden boards of choice.

Main applications

Construction of thermally insulated ventilated pitched roofs. It is recommended that a waterproofing or breathing membrane is installed before tiling.

Specification wording

The external structure of the roof shall consist of ISOLPARMA MISTRAL XPS thermally insulated and ventilated panels, with ….mm Extruded Polystyrene bonded with spacers to 12mm thick OSB3 board.
Panel size 600 x 1200 with Lap-joint edges at all 4 sides.

Sizes and packaging

The panels are supplied in a standard format of 600 x 1200 mm. in packages shrink wrapped with foil.
Package and pallet quantities vary with the thickness of the XPS board ordered (see table).

XPS Thickness mm + ventilation chamber	p.cs/package	m^2/package
30 + 30	36	25,92
40 + 40	28	20,16
50 + 40	24	17,28
50 + 50	22	15,84
60 + 40	22	15,84
60 + 50	20	14,40
80 + 40	18	12,96
100 + 40	16	11,52
120 + 40	14	10,08

Main applications

Micro-ventilated pitched roofs

Marcatura CE

Isolante Polistirene Espanso Estruso (XPS)

MISTRAL panels shall sheltered and protected from weathering during storage.

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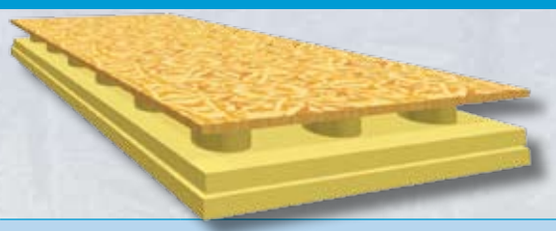

MISTRAL XPS

TECHNICAL DATA SHEET OF THE XPS BOARD

UNI EN 13164

Properties	Code	Norm	Description		XPS	Unit
Density					30 ± 5%	kg/mc
Declared heat conductivity	λ_D	UNI EN 12667	value measured at a mean temperature of 10 °C	mm 20	0,031	W/mK
				mm 30, 40	0,034	
				from mm 50 to 120	0,036	
Declared heat resistance	R_D	UNI EN 12667	related to thickness $R_D=d/\lambda_D$	mm 20	0,65	$(m^2K)/W$
				mm 30	0,88	
				mm 40	1,18	
				mm 50	1,39	
				mm 60	1,37	
				mm 80	2,22	
				mm 100	2,78	
				mm 120	3,33	
Resistance to compression	CS (10/Y)	UNI EN 826	compression to 10% of thickness	mm 20	150	KPa
				mm 30	200	
				from mm 40 to 120	300	
Dimensional stability	DS(TH)	UNI EN 1604	test conditions: 48 h, 70 °C, 90% RH	linear variation	2	%
				variation in thickness	2	%
Fire rating	euroclass	UNI EN 13501-1			E	
Specific heat		UNI EN 12524			1200	J/(KgK)
Resistance to water vapour diffusion	MU	UNI EN 12086	depending on surface		100 - 200	μ
Water absorption by diffusion	WD(v)5	UNI EN 12088	after 28 days, with moisture gradient 0%-100% between board sides and test temperature 50°C	d_N = 50 mm	< 3	% volume
				d_N = 100 mm	< 3	
Water absorption by immersion	WL(T)0,7	UNI EN 12087			> 0,5	% volume
Thickness tolerance	T1	UNI EN 823		< 50	± 2,0	mm
				from 50 to 120	+3,0 / -2,0	
				> 120	+8,0 / -2,0	
Using temperature					75	°C

TECHNICAL DATA SHEET OF THE OSB/3

UNI EN 300

Properties		Norm	Thickness (mm)		Unit
			8 - 10	>10-18	
Mean specific heat		UNI EN 323	670+/-45	670+/-35	kg/m^3
Bending strength	Length	UNI EN 310	22	20	N/mm^2
	Width		11	10	
Modulus of elasticity	Length	UNI EN 310	3500	3500	N/mm^2
	Width		1400	1400	
Swelling in 24 hours		UNI EN 317	<15	<15	%
Thickness tolerance	Smoothed	UNI EN 324-1	+/-0,3	+/-0,3	mm
	Not smoothed		+/-0,8	+/-0,8	
Format tolerance	Length	UNI EN 324-2	+/-3	+/-3	mm
	Width		+/-3	+/-3	
	Squaring		2	2	mm/n
Humidity content		UNI EN 322	873	873	%
Emission of formaldehyde		UNI EN 120	Low formaldehyde E1 Class A<=8mg/100g		
Fire rating class		DIN 4102	B2 – normally inflammable		

Technical Data Sheet issued in November 2007

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