



ONDUL EPS

ONDUL EPS is a thermal insulating system in panels, made up of flame retardant expanded sintered polystyrene, pre-shaped in the lower part, according to the various shapes of the fiber cement slabs; the flat top is covered with a polymer-bitumen waterproof membrane. On demand is available a special selvedge for sealing the overlaps, 8 cm wide on polyester versions and 5 cm on fiberglass versions, composed of a strip self-adhesive protected by siliconized polyethylene. The sealing of the side overlaps always occurs by self-adhesion while the head overlaps or however on the slate, they must be sealed with the help of bituminous mastic PRATIKO MASTIC or, when it is possible, they can be welded with hot air. This special selvedge allows a fast and safe application (without using flame).

Areas of application

Insulating element particularly suitable for the recovery, with confinement, of existing asbestos cement roofing. Before installing ONDUL EPS, the asbestos cement slabs must compulsorily be reclaimed according to current legi-

slation. In order for ONDUL EPS to adapt perfectly to the structure, measurements of the steps, the height and the length of the sheet to be treated are required. Always use a membrane, possibly self-protected, as the finishing layer.

Application

ONDUL EPS must be applied and anchored according to the nature and slope of the application surface and the local weather conditions by means of appropriate mechanical fasteners. Always carry out an accurate preparation of the application surface that must be clean and free from roughness and powdery materials. The system has an excellent resistance to mechanical stress associated with high thermal and acoustic insulation; the bituminous component of the system has the sole function of protecting the insulating element. The next sealing layer must be laid in total adhesion, taking care to apply the sheets to the edge of the sealing strips of the underlying insulation system.

MEMBRANE TECHNICAL CHARACTERISTICS	M.U.	REFERENCE NORM	P	P	V	V	TOLERANCE
REINFORCEMENT TYPE			Single strand polyester		Fibreglass		
UPPER FACE FINISH					PE film		
LOWER FACE FINISH					PE film		
THICKNESS	mm	EN 1849-1	3	4	2	3	±5%
COLD FLEXIBILITY	°C	EN 1109			-10		
FLOW RESISTANCE	°C	EN 1110			120		
FLOW RESISTANCE AFTER AGEING	°C	EN 1296	110				-10°C
SHEAR RESISTANCE L / T	N / 5 cm	EN 12317-1	300/200				±20%
TENSILE STRENGTH L / T	N / 5 cm	EN 12311-1	400/300		300/200		±20%
ELONGATION AT BREAK L / T	%	EN 12311-1	35/35		2/2		±15 / ±2
TEAR RESISTANCE L / T	N	EN 12310-1	130/130		70/70		±30%
DIMENSIONAL STABILITY	%	EN 1107-1	-0,3		NPD		
STATIC PUNCTURE RESISTANCE	kg	EN 12730	10				
DYNAMIC PUNCTURE RESISTANCE	mm	EN 12691	700				
FIRE RESISTANCE		EN 13501-5			F ROOF		
REACTION TO FIRE		EN 13501-1			F		
IMPERMEABILITY AFTER ARTIFICIAL AGEING	kPa	EN 1296	60				
WATERTIGHTNESS	kPa	EN 1928			60		

NPD = No Performance Declared in accordance with the EU Construction Products Directive.

EPS technical specifications (in compliance with current EN 13163 standards)



THERMAL INSULATING PANELS COUPLED WITH BITUMINOUS MEMBRANES

CHARACTERISTICS	U.M.	CODE	100 HEAT RESISTANCE R_p (mq k)/W EN 12667	150 HEAT RESISTANCE R_p (mq k)/W EN 12667	STANDARD
Available thicknesses: 30/75 - 40/90 - 60/110	mm				
30	mm		0,86	0,88	
40	mm		1,14	1,18	
50	mm		1,43	1,47	
60	mm		1,71	1,76	
70	mm		2,00	2,06	
80	mm		2,29	2,35	
90	mm		2,57	2,65	
100	mm		2,86	2,94	
110	mm		3,14	3,24	
Length tolerance	mm	Li	± 2	± 2	EN 822
Width tolerance	mm	Wi	± 2	± 2	EN 822
Thickness tolerance	mm	Ti	± 1	± 1	EN 823
Orthogonal tolerance	mm	Si	± 2/±1000	± 2/±1000	EN 824
Flatness tolerance	mm	Pi	± 5	± 5	EN 825
Declared thermal conductivity	10°C W/mk	λ_b	0.035	0.034	EN 12667
Dimensional stability	%	DS(N)i	± 0.2	± 0.2	EN 1603
Flexural strength	kPa	BSi	≥ 150	≥ 200	EN 12089
Compressive strength at 10% deformation	kPa	CS(10)i	≥ 100	≥ 150	EN 826
Tensile strength perpendicular to faces	kPa	TRi	≥ 100	≥ 100	EN 1607
Water absorption in the long term by total immersion	% Vol limit value	Wit	≤ 3	≤ 5	EN 12087
Water absorption in the long term by partial immersion	kg/m ²	WL(P)	≤ 0,5	≤ 0,5	EN 12087
Water vapour transmission by diffusion	ng/Pa.s.m	Mui/Zi	20-70	30-70	EN 12086
Reaction to fire	class	RF	E	E	EN 13501-1
Water absorption by capillarity	%	-	None	None	
Linear expansion coefficient	K ⁻¹	-	65x10 ⁻⁶	65x10 ⁻⁶	
Permeability to water vapor	mg/ (mhPa)	δ	0,009-0,020	0,009-0,020	EN 12086
Behavior when cutting	kPa		≥ 75	≥ 100	EN 12090
Cutting module	kPa	G	≥ 1000	≥ 1000	EN 12090
Specific heat capacity	J/(kg k)		1260	1450	UNI EN 12524
Temperature of use	°C		-40/+75	-40/+75	

The data reported in this table refer to a bare, uncoupled panel.

We reserve the rights to change or modify the nominal values without prior notice or advice. The information contained in this data sheet are based on our experience. We cannot take any responsibility for a possible incorrect use of the products. The customer has to choose under their own responsibility a product fit for the intended use.

THERMAK
info@thermak.it
www.thermak.it



MATCO S.r.l.
Via Quadrelli, 69
37055 Ronco all'Adige (VR)
Tel. +39.045.6608111