

Technical data sheet

RP0

DESCRIPTION

STIFERITE RP0 is an height performance insulation sandwich board made with STIFERITE CL, a rigid polyurethane foam core, blowing without CFC or HCFC, covered on both side with kraft paper, and on one side bonded with plasterboard.

MAIN APPLICATIONS

Technical insulation and gluing panel
Torch application is not recommended with this product

GUIDELINE FOR DRAFTING OF TECHNICAL SPECIFICATIONS*

Thermal insulation **STIFERITE RP0** made with **STIFERITE CL** in polyurethane rigid foam (PUR) of thickness...(*), covered on both sides with kraft paper, and on one side bonded with plasterboard, has:

RP0 board property
Euroclass reaction to fire: **B s1 d0 (EN 13950)**

Thermal insulation property
Declared thermal conductivity: $\lambda_D = \dots$ **W/mK (EN 13165 Annessi A e C)**
Weight percentage of recycled material: **21.90 – 7.63 %**
Compressive strength at 10% deformation: **minimum value = ... kPa (EN 826)**
Compressive strength at 2% deformation: **minimum value = ... kg/m² (EN 826)**
Water vapour diffusion resistance factor: **$\mu = 87$ (EN 12086)**
Water vapour diffusion resistance: **$Z = 13$ m²hPa/mg (EN 12086)**
Tensile strength perpendicular to faces: **$\sigma_{mt} > 70$ kPa**
Flatness after one-sided wetting: **$FW \leq 20$ mm (EN 13165)**
Water absorptin by total immersion: **$W_{it} < 5$ % (EN 12087)**
Water absorptin by partial immersion: **$W_{sp} < 0.3$ kg/m² (EN 1609)**
Euroclass reaction to fire: **F (EN 11925-2)**

Plasterboard property
Thickness: **9.5 mm**
Euroclass reaction to fire: **A2 s1 d0 (EN 13501-1)**

Product of Company certified according to UNI EN ISO 9001:2000 specifications, with CE conformity mark on the whole range.

(*) Not stated parameters change according to thickness. For introducing the values corresponding to the used thickness, please use the specifications indicated on this technical sheet.

Characteristics and performances

RP0 board

Characteristics [Standard]	Description	Symbol [Units]	Value										
			Some characteristics depend on the thickness (mm)										
			20	30	40	50	60	70	80	90	100	-	
Euroclass reaction to fire [EN 13950]	Adhesive fixing or solid structure as you want. Vertical and horizontal meetline not protected	Euroclass	B s1 d0										
For other characteristics see back →													

Other information	To obtain further technical data call green numer 800840012			
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RPO

Thermal insulation

Characteristics [Standard]	Description	Symbol [Units]	Value										
			Some characteristics depend on the thickness (mm)										
			20	30	40	50	60	70	80	90	100	-	
Average initial thermal conductivity [EN 12667]	Value determined at 10 °C	$\lambda_{90/90,1}$ [W/mK]	0,024										
Declared thermal conductivity [UNI EN 13165 annex A e C]	Value determined at 10 °C C	λ_D [W/mk]	0,028 thickness 20 - 70										
			0,026 thickness 80 - 120										
Declared thermal transmittance	$U_D = \lambda_D / d$	U_D [W/m ² K]	1.40	0.93	0.70	0.56	0.47	0.40	0.33	0.29	0.26	-	
Declared thermal resistance	$R_D = d / \lambda_D$	R_D [m ² K/W]	0.71	1.07	1.43	1.79	2.14	2.50	3.03	3.49	3.85	-	
Project thermal conductivity [UNI EN 12667]	Value determined at 20 °C and 50 % RH	λ_U [W/mk]	0,026 thickness 80 - 120										
Board density	Average value with facing characteristics	ρ [Kg/m ³]	33 ± 1.5										
Nominal thickness [EN 823]		d_N [mm]	production from 20 to 100 mm. Available on order until 120 mm										
Compressive strength [EN 826]	Value determined at 10% deformation	$\sigma_{10} \sigma_m$ [kPa]	100	100	100	100	100	100	100	100	100	100	-
Compressive strength [EN 826]	Value determined at 2% deformation	σ_2 [kg/m ²]	4800	4800	4300	4800	4800	4800	4800	4800	4800	4800	-
Dimensional stability under specified temperature and humidity [EN 1604]	48h (±1) a 70°C (±2) e 90% UR (±5)	DS(TH) [% dimensions]	1	1	1	1	1	1	1	1	1	1	-
		[% thickness]	5	5	4	3	3	3	3	3	3	3	-
	48h (±1) a -20°C (±3)	[% dimensions]	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	-
		[% thickness]	1	1	1	1	1	1	1	1	1	1	-
Euroclass reaction to fire [EN 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	Class	Euroclass	F										
Specific heat capacity	Value	C_p [J/kg K]	1498										
			For other characteristics see back →										

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Thermal insulation

Characteristics [Standard]	Description	Symbol [Units]	Value										
			Some characteristics depend on the thickness (mm)										
			20	30	40	50	60	70	80	90	100	-	
Water vapor diffusion resistance factor [EN 12086]	Value	μ (MU)	87 ± 19										
Water vapor diffusion resistance [EN 12086]	Value	Z [m ² hPa/mg]	13 ± 3										
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less than 5% _w										
Tensile strength perpendicular to faces [EN 1607]	Value	σ_{mt} [kPa]	More than 70										
Flatness after one-sided wetting [EN 13165]	Value	FW [mm]	≤ 20										
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less than 5% _w										
Water absorption [EN 1609]	Partial immersion	W _{ip} [kg/m ²]	Less than 0.3										
Weight percentage of recycled material	The variation depends on the thickness	%	21.90 – 7.63										

Plasterboard property

Characteristics [Standard]	Description	Symbol [Units]	Value
Thickness		[mm]	9.5
Density	Valore medio	[kg/m ³]	737 ± 30
Euroclass reaction to fire [EN 13501-1] [EN 13823 (SBI)]	Class	Euroclass	A2 - s1 - d0
Thermal conductivity [UNI 10351-94]		[W/m K]	0.21
Superficial hardness [UNI 7892]		[mm]	< 20
			For other characteristics see back →

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Plasterboard property

Characteristics [Standard]	Description	Symbol [Units]	Value
Bending strenght	Longitudinal (minimum value)	[N]	400
	Trasversal (minimum value)	[N]	160

Tolerances and notes

Tolerances [UNI EN 13165]	Thickness	T2 [mm]	<50 ±2 mm		from 50 to 75 ±3 mm		>75 +5 /-2 mm	
	Dimensions		< 1000 ±5 mm	from 1000 to 2000 ±7,5 mm	from 2000 to 4000 ±10 mm	> 4000 ±15 mm		
Notes	stability to the temperature	Stiferite panels are used in a range of continuous temperatures normally included between -40 °C e +110 °C. During short time they can resist also to temperatures till + 200 °C, or corresponding to the temperature of fused bitumen, without particular problems. Long exposures to the temperatures could cause deformations to the foam or to the coats, but without causing sublimation or fusion. Resistance to the torch and some other reactions to fire are characteristics connected with the kind of used panel.						
	Dimensional stability	The paper covering, even if bituminous paper, is sensitive to the variations of damp. The absorpton of damp for direct exposure or for contact with wet surfaces and the following desiccation, modifies the stability of the coverings causing the loss of the flatness. For not problems is advisable to fix pannels and to complete the laying with immediate execution of the other elements of finish or protection.						
	Aspect	Any possible little areas of non-adhesion between coats and foam are originated by the production process and don't prejudice in any way the physical-mechanical properties of the panels.						

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