

Technical data sheet

RP3

DESCRIPTION

STIFERITE RP3 is an height performance insulation board with a rigid polyisocyanurate polyiso foam core, blowing without CFC or HCFC, covered on both side with gas diffusion tight facing (aluminium foil), 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 RP3** in polyiso rigid foam (PIR) of thickness...(*), covered on both sides with gas diffusion tight facing (aluminium foil), and bonded to one side with plasterboard, has:

RP3 board property

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

Weight percentage of recycled material: **2.30 – 1.24 %**

Weight percentage of renewable material: **4.53 – 3.85 %**

Thermal insulation property

Declared thermal conductivity: **$\lambda_D = 0.023$ W/mK (EN 13165 Annessi A e C)**

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 for 100 mm of thick: **$\mu > 89900$ (EN 12086)**

Water vapour diffusion resistance: **$Z > 13440$ m²hPa/mg (EN 12086)**

Tensile strength perpendicular to faces: **$\sigma_{mt} > 50$ kPa**

Flatness after one-sided wetting: **FW \leq 10 mm (EN 13165)**

Water absorptin by total immersion: **$W_{it} < 1$ % (EN 12087)**

Water absorptin by partial immersion: **$W_{sp} < 0.1$ kg/m² (EN 1609)**

Euroclass reaction to fire: **E (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

RP3 board

Characteristics [Standard]	Description	Symbol [Units]	Value									
			Some characteristics depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	120
Euroclass reaction to fire [EN 13950]	Adhesive fixing or solid structure as you want. Vertical and horizontal meetline not protected	Euroclass	B s1 d0									
Weight percentage of recycled material	The variation depends on the thickness	%	2.30 – 1.24									
Weight percentage of renewable material	The variation depends on the thickness	%	4.53 – 3.85									

For other characteristics see back →

Other information	To obtain further technical data call green numer 800840012		
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Thermal insulation characteristics and performances

Characteristics [Standard]	Description	Symbol [Units]	Value									
			Some characteristics depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	120
Average initial thermal <input type="checkbox"/> etermined <input type="checkbox"/> y [EN 12667]	Value determinad at 10 °C	$\lambda_{90/90,1}$ [W/mK]	0,022									
Declared thermal conductivity [UNI EN 13165 annex A e C]	Value <input type="checkbox"/> etermined at 10 °C C	λ_D [W/mk]	0,023									
Declared thermal trasmittance	$U_D = \lambda_D / d$	U_D [W/m ² K]	1.15	0.77	0.58	0.46	0.38	0.33	0.29	0.26	0.23	0.19
Declared thermal resistance	$R_D = d / \lambda_D$	R_D [m ² K/W]	0.87	1.30	1.74	2.17	2.61	3.04	3.48	3.91	4.35	5.22
Board density	Average value with facing characteristics	ρ [Kg/m ³]	34 ± 1.5									
Nominal thickness [EN 823]		d_N [mm]	production from 20 to 80 mm. Available on order until 120 mm									
Compressive strenght [EN 826]	Value determinad at 10% deformation	σ_{10} σ_m [kPa]	150	140	140	140	140	150	130	130	130	130
Compressive strenght [EN 826]	Value determinad at 2% deformation	σ_2 [kPa]	6000	5000	5200	6000	6000	6000	6000	5000	5000	5000
Dimensional stability under specified temperature and umidity [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	4	4	4	4	4	4	4	4	4
		[% dimensions]	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
	48h (±1) a -20°C (±3)	[% 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	E									
Specific heat capacity	Value	C_p [J/kgK]	1442									
Emisivity of the facing	Value	ϵ	> 0.05									
Water vapor diffusion resistance factor [EN 12086]	Value For 100 mm of thick	μ (MU)	> 89900									
Water vapor diffusion resistance [EN 12086]	The variation depends on the thickness	Z [m ² hPa/mg]	> 13440									
Tensile strength perpendicular to faces [EN 1607]	Value	σ_{mt} [kPa]	More than 50									
Flatness after one-sided wetting [EN 13165]	Value	FW [mm]	≤ 10									

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Thermal insulation characteristics and performances

Characteristics [Standard]	Description	Symbol [Units]	Value									
			Some characteristics depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	120
Water absorption [EN 12087]	Total immersion for 28 days	W_{it} [%]	Less than 1% _w									
Water absorption [EN 1609]	Partial immersion	W_{ip} [kg/m ²]	Less than 0.1									
emission rate of volatile organic compounds [EN 16000-9]	Value For 20 mm of thick	-	available on request									

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
Bending strenght	Longitudinal (minimum value)	[N]	400
	Trasversal (minimum value)	[N]	160
			For other characteristics see back →

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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
Notes	stability to the temperature	<p>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.</p>			
	Aspect	<p>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.</p>			

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