

Technical data sheet

RP2

DESCRIPTION

STIFERITE RP2 is an height performance insulation sandwich board made with STIFERITE GT, a rigid polyisocyanurate polyiso foam core, blowing without CFC or HCFC, covered on both side with glass fiber facing, and bonded to one side 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 RP2** made with **STIFERITE CLASS S** in polyisocyanurate polyiso foam (PIR) of thickness...(*), covered on both sides with glass fiber, and bonded to one side with plasterboard, has:

RP2 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: **3.23 – 2.45 %**

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: **$\mu = 56$ (EN 12086)**

Water vapour diffusion resistance: **$Z = 8.0 \text{ m}^2 \text{ hPa/mg}$ (EN 12086)**

Tensile strength perpendicular to faces: **$\sigma_{mt} > 70 \text{ kPa}$**

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

Water absorptin by total immersion: **$W_{it} < 2 \%$ (EN 12087)**

Water absorptin by partial immersion: **$W_{sp} < 0.2 \text{ kg/m}^2$ (EN 1609)**

Euroclass reaction to fire: **E (EN 11925-2)**

Environmental product declaration for 60 mm thickness **(ISO 14040 and MSR 1999:2)**

Normal 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

RP2 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 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	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			
Technical data sheet	Stiferite RP2	Rev. 4 20/01/2011	Author: F. Raggiotto	Verified: L. Tolin

Technical data sheet

RP2

Pag. 2/4

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 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	0.22
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	4.62
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]	35 ± 1.5									
Nominal thickness [EN 823]		d_N [mm]	production from 20 to 120 mm									
Compressive strength [EN 826]	Value determined at 10% deformation	σ_{10} o σ_m [kPa]	150	150	140	150	150	150	130	130	130	130
Compressive strength [EN 826]	Value determined at 2% deformation	σ_2 [kg/m ²]	5000	6000	5000	5000	6000	6000	5000	6000	6000	6000
Dimensional stability under specified temperature and umidity [EN 1604]	48h (±1) a 70°C (±2) e 90% RH (±5)	DS(TH) [% dimensions]	1	1	1	1	1	1	1	1	1	1
		[% thickness]	6	6	5	4	3	3	4	4	4	4
	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	E									
Specific heat capacity	Value	C_p [J/kgK]	1464									
Modulus of elasticity for compressive	Value	[kg/cm ²]	57.9 ± 9.62									
Modulus of elasticity for tensile	Value	[kg/cm ²]	56.4 ± 4.66									
Acoustic isolation to wall [UNI EN ISO 140-3] [UNI EN ISO 717-1]	Stratigraphy: o 15 mm plaster o Brick from 12 mm o STIFERITE GT from 40 mm o Air from 10 mm o Brick from 8 mm o 15 mm plaster	R_w [dB]	54									
For other characteristics see back →												

Other information	To obtain further technical data call green numer 800840012		
Technical data sheet	Stiferite RP2	Rev. 4 20/01/2011	Author: F. Raggiotto Verified: L. Tolin

Technical data sheet

RP2

Pag. 3/4

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 vapor diffusion resistance factor [EN 12086]	Value	μ (MU)	56 ± 2									
Water vapor diffusion resistance [EN 12086]	Value	Z [m ² hPa/mg]	8.0 ± 0.3									
Tensile strength perpendicular to faces [EN 1607]	Value	σ_{mt} [kPa]	More than 70									
Flatness after one-sided wetting [EN 13165]	Value	FW [mm]	≤ 10									
Water absorption [EN 12087]	Total immersion for 28 days	W _{it} [%]	Less than 2% _w									
Water absorption [EN 1609]	Partial immersion	W _{ip} [kg/m ²]	Less than 0.2									
Weight percentage of recycled material	The variation depends on the thickness	%	3.23 – 2.45									
			For other characteristics see back →									

Other information	To obtain further technical data call green numer 800840012			
Technical data sheet	Stiferite RP2	Rev. 4 20/01/2011	Author: F. Raggiotto	Verified: L. Tolin

Technical data sheet

RP2

With standard 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

RP2 property with A1 Class (EN520) plasterboard (available on request)

Characteristics [Standard]	Description	Symbol [Units]	Value
Euroclass reaction to fire [D.M. 25-10-2007]	Mechanical fixing to a support and fixing through grapevines, brace or nails	Euroclass	B - s1 - d0

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	<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>						

Other information	To obtain further technical data call green numer 800840012			
Technical data sheet	Stiferite RP2	Rev. 4 20/01/2011	Author: F. Raggiotto	Verified: L. Tolin