

RP1

DESCRIPTION

STIFERITE RP1 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 Duotwin® facing, and on one side 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 RP1** made with **STIFERITE GT** in polyisocyanurate polyiso foam (PIR) of thickness...(*), covered on both sides with Duotwin® facing, and on one side bonded to one side with plasterboard, has:

Thermal insulation property

Declared thermal conductivity: $\lambda_D = 0.024 \text{ W/mK}$ (EN 13165 Annex A e C)

Compressive strenght: **minimum value = ... kPa** (EN 826)

Water vapour diffusion resistance factor: $\mu = 148$ (EN 12086)

Water vapour diffusion resistance: $Z = 21 \text{ m}^2/\text{hPa}$ (EN 12086)

Water absorptin by total immersion: **WL < 1 %** (EN 12087)

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

Thermal insulation

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 determinad at 10 °C	$\lambda_{90/90,1}$ [W/mK]	0,022									
Declared thermal conductivity [UNI EN 13165 annex A e C]	Value determinad at 10 °C C	λ_D [W/mk]	0,024									
Declared thermal trasmittance	$U_D = \lambda_D / d$	U_D [W/m ² K]	1.20	0.80	0.60	0.48	0.40	0.34	0.30	0.27	0.24	0.20
Declared thermal resistance	$R_D = d / \lambda_D$	R_D [m ² KW]	0.83	1.25	1.67	2.08	2.50	2.92	3.33	3.75	4.17	5.00

For other characteristics see back →

Other information	To obtain further technical data call green numer 800840012		
Technical data sheet	Stiferite RP1	Rev. 0 13/03/2008	Author: F. Raggiotto
			Verified: L. Tolin

Technical data sheet

RP1

Pag. 2/3

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
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
	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
Compressive strenght [EN 826]	Value determinad at 10% deformation	$\sigma_{10} \sigma_m$ [kPa]	150	150	140	150	150	150	130	130	130	130
Board density	Average value with facing characteristics	ρ [Kg/m ³]	36									
Nominal thickness [EN 823]		d_N [mm]	production from 20 to 120 mm									
Euroclass reaction to fire [EN 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	Class	Euroclass	F									
Euroclass reaction to fire [EN 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	foam	Euroclass	E									
Specific heat capacity	Value	C_p [J/kg°C]	1453									
Acoustic isolation to wall [UNI EN ISO 140-3] [UNI EN ISO 717-1]	Stratigraphy: ○ 15 mm plaster ○ Brick from 12 mm ○ STIFERITE GT from 40 mm ○ Air from 10 mm ○ Brick from 8 mm ○ 15 mm plaster	R_w [dB]	54									
Water vapor diffusion resistance factor [EN 12086]	Value	μ (MU)	148 ± 24									
Water vapor diffusion resistance [EN 12086]	Value	Z [m ² /hPa]	21 ± 3									
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less then 1% _w									
For other characteristics see back →												

Other information	To obtain further technical data call green numer 800840012		
Technical data sheet	Stiferite RP1	Rev. 0 13/03/2008	Author: F. Raggiotto Verified: L. Tolin

Technical data sheet

RP1

Pag. 3/3

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

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.</p> <p>Long exposures to the temperatures could cause deformations to the foam or to the coats, but without causing sublimation or fusion.</p> <p>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 RP1	Rev. 0 13/03/2008	Author: F. Raggiotto Verified: L. Tolin