

# RP2

## 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 RP2** made with **STIFERITE CLASS S** in polyisocyanurate polyiso foam (PIR) of thickness...(\*), covered on both sides with glass fiber, and on one side bonded to one side with plasterboard, has:

Thermal insulation property

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

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

Water vapour diffusion resistance factor:  **$\mu = 56$  (EN 12086)**

Water vapour diffusion resistance:  **$Z = 8.0$  m<sup>2</sup>/hPa (EN 12086)**

Water absorptin by total immersion: **WL < 2 % (EN 12087)**

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

Normal plasterboard property

Thickness: **9.5 mm**

Euroclass reaction to fire: **A2 s1 d0 (EN 13501-1)**

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

Euroclass reaction to fire: **B 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]	<b>0,024</b>									
Declared thermal conductivity [UNI EN 13165 annex A e C]	Value determinad at 10 °C C	$\lambda_D$ [W/mk]	<b>0,028</b> thickness 20 - 70									
			<b>0,026</b> thickness 80 - 120									
Declared thermal trasmittance	$U_D = \lambda_D / d$	$U_D$ [W/m <sup>2</sup> K]	<b>1.40</b>	<b>0.93</b>	<b>0.70</b>	<b>0.56</b>	<b>0.47</b>	<b>0.40</b>	<b>0.33</b>	<b>0.29</b>	<b>0.26</b>	<b>0.22</b>
Declared thermal resistance	$R_D = d / \lambda_D$	$R_D$ [m <sup>2</sup> KW]	<b>0.71</b>	<b>1.07</b>	<b>1.43</b>	<b>1.79</b>	<b>2.14</b>	<b>2.50</b>	<b>3.03</b>	<b>3.49</b>	<b>3.85</b>	<b>4.62</b>

For other characteristics see back →

Other information	To obtain further technical data call <b>green numer 800840012</b>		
Technical data sheet	Stiferite RP2	Rev. 1 15/10/2008	Author: F. Raggiotto Verified: L. Tolin

**Technical data sheet**

**RP2**

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]	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
Compressive strenght [EN 826]	Value determinad at 10% deformation	$\sigma_{10} \sigma_{\sigma m}$ [kPa]	150	150	140	150	150	150	130	130	130	130
Board density	Average value with facing characteristics	$\rho$ [Kg/m <sup>3</sup> ]	35									
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	E									
Specific heat capacity	Value	$C_p$ [J/kg°C]	1464									
Modulus of elasticity for compressive	Value	[kg/cm <sup>2</sup> ]	57.9 ± 9.62									
Modulus of elasticity for tensile	Value	[kg/cm <sup>2</sup> ]	56.4 ± 4.66									
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	$\mu$ (MU)	56 ± 2									
Water vapor diffusion resistance [EN 12086]	Value	$Z$ [m <sup>2</sup> /hPa]	8.0 ± 0.3									
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less then 2% <sub>w</sub>									
			For other characteristics see back →									

Other information	To obtain further technical data call <b>green numer 800840012</b>		
Technical data sheet	Stiferite RP2	Rev. 1 15/10/2008	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 <sup>3</sup> ]	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	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.				
	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.				

Other information	To obtain further technical data call <b>green numer 800840012</b>			
Technical data sheet	Stiferite RP2	Rev. 1 15/10/2008	Author: F. Raggiotto	Verified: L. Tolin