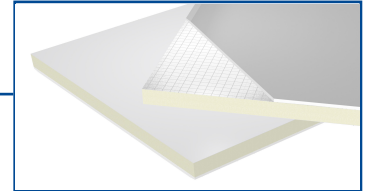


# RP



## ■ Description

**STIFERITE RP** is a sandwich panel made by STIFERITE board, a high performance insulation board of polyiso (PIR) foam, manufactured from CFC or HCFC free, covered on both main sides by a gas tight multilayer facer, and bonded to one side with plasterboard of 12.5 mm or 9.5 mm of thickness. On request:

- RP\_WP made by STIFERITE and bonded to moisture resistance plasterboard of 12,5 mm thick
- RP\_A1 made by STIFERITE and bonded to uncombustible plasterboard of 12,5 mm thick with A1 reaction to fire

## ■ Linee Guida per la stesura di capitolati tecnici

Thermal insulation **STIFERITE RP** made by an insulation PU (PIR) board of thickness...(\*), with a multilayer gas tight facer on the main sides and a moisture resistance layer on hot side, bonded to plasterboard (CG) of 13 mm (nominal 12,5 mm) or 10 mm (nominal 9,5 mm), had (or bonded to a moisture resistance plasterboard of 12,5 mm - or bonded to an uncombustible plasterboard of 12,5 mm with A1 reaction to fire):

Declared thermal resistance:  $R_D = \dots$  m<sup>2</sup>K/W (EN 13165 Annex A and C)

... (it is recommended to complete the technical specification using the most relevant features and performance for the specific application)

**STIFERITE RP** is produced of Company certified according to: **UNI EN ISO 9001:2015** quality management system, **UNI EN ISO 14001:2015** environmental management system, **OHSAS 18001:2007** occupational health and safety management system, and it has CE marking and labelling. The Environmental Product Declaration (EPD), verified by the Third Party Liability, and the Environmental Minimum Criteria (CAM) according to Green Public Procurement (GPP) are available.

(\* ) Parameters change according to thickness or system. To determine the values corresponding to the thickness used, please use the specifications indicated on this technical sheet.

## ■ Dimensions

length and width:  
1200 x 3000 mm  
nominal thickness [d] EN 823:  
**from 33 to 153 mm**

## ■ Main applications

insulation of internal walls  
and suspended metal frame  
ceilings



## ■ MAIN CHARACTERISTICS AND PERFORMANCE - Relevant to the CE marking [UNI EN 13950]

### ■ Declared thermal conductivity - $\lambda_D$ [W/mK]

PU - UNI EN 13165 Annex A e C - CG UNI 10351-94  
Value determined at an average temperature of 10° C  
**see table - values according to thickness**

### ■ Declared thermal resistance - $R_D = d / \lambda_D$ - [m<sup>2</sup>K/W]

see table - values according to thickness

### ■ Declared thermal transmittance - $U_D = \lambda_D / d$ [W/m<sup>2</sup>K]

see table - values according to thickness

### ■ Reaction to fire

EN 13501-1, EN 11925-2, EN 13823  
**B s1 d0 EUROCLASS**

### ■ Flexural strength [N]

EN 520  
**> 400 N(L)**  
**> 160 N(T)**

### ■ Impact Resistance [mm]

ISO 7892  
**< 20**

### ■ Water vapour diffusion resistance factor

EN 12086  
Insulation board PU-PIR:  $\mu$  **89900**  
Plasterboard CG:  $\mu$  **10**

### ■ Acoustic isolation of wall - $R_w$ [DB]

UNI EN ISO 140-3, UNI EN ISO 717-1  
**52**

see "Isolamento Acustico" technical notebook on [www.stiferite.com](http://www.stiferite.com)

d PU mm	d CG mm*	d Tot. mm	$\lambda_D$ W/mK	$R_D$ m <sup>2</sup> K/W	$U_D$ W/m <sup>2</sup> K
20		33	Insulation board PU-PIR 0,022	0,97	1,03
30		43		1,42	0,70
40		53		1,88	0,53
50		63		2,33	0,43
60		73		2,79	0,36
70	13	83		3,24	0,31
80		93	Plasterboard CG 0,21	3,70	0,27
90		103		4,15	0,24
100		113		4,60	0,22
110		123		5,06	0,20
120		133	5,51	0,18	
140		153	6,42	0,16	

\* for the values of the variant that uses plasterboard thickness 9.5 mm, contact the STIFERITE Technical Office

### ■ Tolerances [mm] EN 13950

**Length and width ± 10 mm**  
**Thickness ± 3 mm**  
**offset**  
**width ± 5 mm**  
**Length from - 5 to + 8 mm**

## ■ OTHER CHARACTERISTICS AND PERFORMANCE

### ■ Weight percentage of recycled material - [%]

Average values  
**2,40 - 1,59**

### ■ Environmental Product Declaration (EPD), by the Third Party Liability

ISO 14025 and EN 15804

### ■ Release of volatile organic compounds

UNI EN ISO 16000  
**A+ French class**



## STIFERITE PU Insulation board - (PIR)



### ■ MAIN CHARACTERISTICS AND PERFORMANCE - Relevant to the CE marking [UNI EN 13165]

■ **Declared thermal conductivity J -  $\lambda_D$  [W/mK]**

UNI EN 13165 Annex A and C

Value determined at an average temperature of 10° C  
see table J values according to thickness

■ **Declared thermal resistance -  $R_D = d / \lambda_D$  - [m²K/W]**

tsee table - values according to thickness

■ **Declared thermal transmittance -  $U_D = \lambda_D / d$  [W/m²K]**

see table - values according to thickness

■ **Compressive stress at 10% deformation -  $\sigma_{10}$  [kPa]**

EN 826

**150 kPa** [CS(10/Y)150] CE Designation code

■ **Tensile strength perpendicular to faces  $\sigma_{mt}$  [kPa] EN 1607**

> **30 kPa** [TR30] CE Designation code

■ **Water vapour diffusion resistance factor -  $\mu$  EN 12086**

> **89900**

■ **Short term water absorption by partial immersion [kg/m²]**

EN 1609

< **0,1** [WS(P)0,1] CE Designation code

■ **Long term water absorption b total immersion [% weight]**

EN 12087

< **1** [WL(T)1] CE Designation code

d mm	$\lambda_D$ W/mK	$R_D$ m²K/W	$U_D$ W/m²K
20	0,022	0,91	1,10
30		1,36	0,73
40		1,82	0,55
50		2,27	0,44
60		2,73	0,37
70		3,18	0,31
80		3,64	0,28
90		4,09	0,24
100		4,55	0,22
110		5,00	0,20
120		5,45	0,18
140		6,36	0,16

■ **Dimensional stability [level] EN 1604**

**48 h, 70° C, 90% UR**

**3 per d < 50** [DS(70;90)3] CE Designation code

**4 per d ≥ 50** c[DS(70;90)4] CE Designation code

**48 h, -20° C, 0% UR mm**

**2** [DS(-20;0)2] CE Designation code

### OTHER CHARACTERISTICS AND PERFORMANCE

■ **Overall density -  $\rho$  [kg/m³]**

EN1602 Board average value

**35 ± 1,5**

■ **Specific heat -  $C_p$  [J/kg° C] Average value**

**1464**

■ **Compressive stress at 2% deformation -  $\sigma_2$  [kg/m²]**

EN 826

>**5000**

■ **Pull through resistance - [N] EN 16382**

> **800**

■ **Long term water absorption by diffusion - [kg/cm²]**

EN 12090

<**2.1** for d = 20 mm and <**0.3** for d = 120 mm

■ **Dynamic stiffness -  $s'_t$  [MN/m³]**

EN 29052-1

**68** for d = 20 mm and **59** for d = 30 mm

■ **Water vapour resistance - [m²hPa/mg]**

EN 12086

>**13440**

■ **Weight percentage of recycled material - [%]**

Average value

**2.02**

### ADDITIONAL REPORTS AND CERTIFICATION

■ **Management System Certification:**

- **UNI EN ISO 9001:2015 quality management system,**

- **UNI EN ISO 14001:2015 environmental management system,**

- **OHSAS 18001:2007 occupational health and safety management system**

■ **Environmental Product Declaration (EPD), by the Third Party Liability**

ISO 14040 and MSR 1999:2

### NOTES:

**Temperature stability**

Stiferite panels can be used in a continuous temperature range of -40° C to +110° C. For periods of time they can withstand temperatures up to + 200° C, or equivalent to the softening temperature of bitumen, without any particular problems. Long exposures at temperatures above + 110° C may cause deformations to the foam or coatings, but do not cause sublimation or melting.

**Aspect**

Any small non-adhesion areas between the facers and the foam or holes originate from the production process and they do not in any way affect the physical-mechanical properties of the panels. A prolonged exposure of polyurethane foam to UV rays can cause surface oxidation, the phenomenon does not affect the basic characteristics and performance of the panel.

**Packaging & Storage**

STIFERITE panels of standard sizes are normally packed with PE, in closed packages with CE mark label. Store the packages raised from the ground. For long periods, store the packages in wet area.

**Warning**

The data shown in this sheet are binding for the features and performances provided by the CE marking. Other features and additional information may be modified even if no specific signal is available.

**Other notes**

To obtain technical data not covered in this Technical Data Sheet, contact the Stiferite Technical Office

## Plasterboard - RP



### ■ MAIN CHARACTERISTICS AND PERFORMANCE - Relevant to the CE marking [UNI EN 520]

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>■ <b>Nominal thickness [mm]</b><br/>12,5 or 9.5</li> <li>■ <b>Thermal conductivity - <math>\lambda</math> [W/mK]</b><br/>UNI 10351-94<br/>Value determined at an average temperature of 10° C<br/>0,21</li> <li>■ <b>Reaction to fire</b> EN 13501-1, EN 11925-2, EN 13823<br/><b>A2 s1 d0 EUROCLASS</b></li> <li>■ <b>Specific heat - Cp - [J/kgK]</b><br/>UNI EN 10456<br/>1000</li> </ul> | <ul style="list-style-type: none"> <li>■ <b>Overall density - <math>\rho</math> - kg/m<sup>3</sup></b><br/>UNI EN 520<br/>736</li> <li>■ <b>Surface water absorption [g/m<sup>2</sup>]</b><br/>UNI EN 520<br/>-</li> <li>■ <b>Total water absorption [%]</b><br/>UNI EN 520<br/>-</li> </ul> |
|---|--|

## Plasterboard - RP\_WP



### ■ MAIN CHARACTERISTICS AND PERFORMANCE - Relevant to the CE marking [UNI EN 520]

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>■ <b>Nominal thickness [mm]</b><br/>12,5</li> <li>■ <b>Thermal conductivity - <math>\lambda</math> [W/mK]</b><br/>UNI 10351-94<br/>Value determined at an average temperature of 10° C<br/>0,21</li> <li>■ <b>Reaction to fire</b> EN 13501-1, EN 11925-2, EN 13823<br/><b>A2 s1 d0 EUROCLASS</b></li> <li>■ <b>Specific heat - Cp - [J/kgK]</b><br/>UNI EN 10456<br/>1000</li> </ul> | <ul style="list-style-type: none"> <li>■ <b>Overall density - <math>\rho</math> - kg/m<sup>3</sup></b><br/>UNI EN 520<br/>785</li> <li>■ <b>Surface water absorption [g/m<sup>2</sup>]</b><br/>UNI EN 520<br/>≤ 180</li> <li>■ <b>Total water absorption [%]</b><br/>UNI EN 520<br/>≤ 5</li> </ul> |
|--|--|

## Plasterboard - RP\_A1



### ■ MAIN CHARACTERISTICS AND PERFORMANCE - Relevant to the CE marking [UNI EN 520]

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>■ <b>Nominal thickness [mm]</b><br/>12,5</li> <li>■ <b>Thermal conductivity - <math>\lambda</math> [W/mK]</b><br/>UNI 10351-94<br/>Value determined at an average temperature of 10° C<br/>0,21</li> <li>■ <b>Reaction to fire</b> EN 13501-1, EN 11925-2, EN 13823<br/><b>A1 EUROCLASS</b></li> <li>■ <b>Specific heat - Cp - [J/kgK]</b><br/>UNI EN 10456<br/>1000</li> </ul> | <ul style="list-style-type: none"> <li>■ <b>Overall density - <math>\rho</math> - kg/m<sup>3</sup></b><br/>UNI EN 520<br/>775</li> <li>■ <b>Surface water absorption [g/m<sup>2</sup>]</b><br/>UNI EN 520<br/>-</li> <li>■ <b>Total water absorption [%]</b><br/>UNI EN 520<br/>-</li> </ul> |
|--|--|

### OTHER CHARACTERISTICS AND PERFORMANCE

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>■ <b>Stabilità alla temperatura</b><br/>Stiferite panels can be used in a continuous temperature range of -40° C to +110° C. For periods of time they can withstand temperatures up to + 200° C, or equivalent to the softening temperature of bitumen, without any particular problems. Long exposures at temperatures above + 110° C may cause deformations to the foam or coatings, but do not cause sublimation or melting.<br/>A prolonged exposure of polyurethane foam to UV rays can cause surface oxidation, the phenomenon does not affect the basic characteristics and performance of the panel.</li> </ul> | <ul style="list-style-type: none"> <li>■ <b>Aspect</b><br/>Any small non-adhesion areas between the facers and the foam or holes originate from the production process and they do not in any way affect the physical-mechanical properties of the panels. A prolonged exposure of polyurethane foam to UV rays can cause surface oxidation, the phenomenon does not affect the basic characteristics and performance of the panel.</li> </ul> |
|--|--|