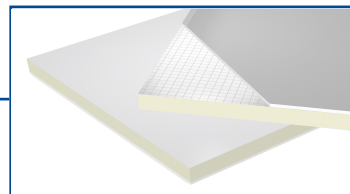


RP



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), - 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, had:

Declared thermal resistance: $R_D = \dots$ m²K/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** quality management system, **UNI EN ISO 14001** environmental management system, **UNI EN ISO 45001** 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 - λ_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 - $R_D = d / \lambda_D$ - [m²K/W]

see table - values according to thickness

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

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: **μ 89900**
Plasterboard CG: **μ 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

d PU mm	d CG mm*	d Tot. mm	λ_D W/mK	R_D m ² K/W	U_D W/m ² 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		83		3,24	0,31
80	13	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 - [%]

Procedure REMADE®
> 4 on insulation foam weight

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

ISO 14025 and EN 15804

Release of volatile organic compounds VOC

EN 16516, ISO 16000-3, ISO 16000-6
Certificate Indoor Air Comfort Gold

STIFERITE PU Insulation board - (PIR)



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

■ Declared thermal conductivity λ_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]

see 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 - σ_{10} [kPa]

EN 826

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

■ Tensile strength perpendicular to faces σ_{mt} [kPa] EN 1607

> 30 kPa [TR30] CE Designation code

■ Water vapour diffusion resistance factor - μ EN 12086

> 89900

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

EN 1609

< 0,3 [WS(P)0,3] CE Designation code

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

EN 12087

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

d mm	λ_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 $d \geq 50$ 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 - ρ [kg/m³]

EN1602 Board average value

35 ± 1,5

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

1810

■ Compressive stress at 2% deformation - σ_2 [kg/cm²]

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

see "Isolamento Acustico" technical notebook on www.stiferite.com

GT product

■ Water vapour resistance - Z [m²hPa/mg]

EN 12086

>13440

■ Weight percentage of recycled material - [%]

Procedure REMADE®

> 4

ADDITIONAL REPORTS AND CERTIFICATION

■ Management System Certification:

- UNI EN ISO 9001 quality management system,
- UNI EN ISO 14001 environmental management system,
- UNI EN ISO 45001 occupational health and safety management system

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

ISO 14040 and EN 15804

■ Release of volatile organic compounds VOC

EN 16516, ISO 16000-3, ISO 16000-6

Certificate Indoor Air Comfort Gold

■ Reaction to fire - continuous smouldering combustion

EN 16733

No continuous smouldering combustion

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]

- | | |
|--|--|
| ■ Nominal thickness [mm]
12,5 or 9,5 | ■ Overall density - ρ - kg/m³
UNI EN 520
736 |
| ■ Thermal conductivity - λ [W/mK]
UNI 10351-94
Value determined at an average temperature of 10° C
0,21 | ■ Surface water absorption [g/m²]
UNI EN 520
- |
| ■ Reaction to fire EN 13501-1, EN 11925-2, EN 13823
A2 s1 d0 EUROCLASS | ■ Total water absorption [%]
UNI EN 520
- |
| ■ Specific heat - Cp - [J/kgK]
UNI EN 10456
1000 | |

Plasterboard - RP_WP



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

- | | |
|--|--|
| ■ Nominal thickness [mm]
12,5 | ■ Overall density - ρ - kg/m³
UNI EN 520
785 |
| ■ Thermal conductivity - λ [W/mK]
UNI 10351-94
Value determined at an average temperature of 10° C
0,21 | ■ Surface water absorption [g/m²]
UNI EN 520
≤ 180 |
| ■ Reaction to fire EN 13501-1, EN 11925-2, EN 13823
A2 s1 d0 EUROCLASS | ■ Total water absorption [%]
UNI EN 520
≤ 5 |
| ■ Specific heat - Cp - [J/kgK]
UNI EN 10456
1000 | |

Plasterboard - RP_A1



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

- | | |
|--|--|
| ■ Nominal thickness [mm]
12,5 | ■ Overall density - ρ - kg/m³
UNI EN 520
775 |
| ■ Thermal conductivity - λ [W/mK]
UNI 10351-94
Value determined at an average temperature of 10° C
0,21 | ■ Surface water absorption [g/m²]
UNI EN 520
- |
| ■ Reaction to fire EN 13501-1, EN 11925-2, EN 13823
A1 EUROCLASS | ■ Total water absorption [%]
UNI EN 520
- |
| ■ Specific heat - Cp - [J/kgK]
UNI EN 10456
1000 | |

OTHER CHARACTERISTICS AND PERFORMANCE

- | | |
|--|---|
| ■ Stabilità alla temperatura
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.
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. | ■ 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. |
|--|---|