CE

# DECLARATION OF PERFORMANCE
# No. 29

1. Unique identification code of product type:

**Sandwich panel with E-PIR polyisocyanurate core**

| | | |
|---|---|---|
| SP2B40E-PIR<br>SP2B60E-PIR<br>SP2B80E-PIR<br>SP2B100E-PIR<br>SP2B110E-PIR<br>SP2B120E-PIR<br>SP2B150E-PIR | SP2E120E-PIR<br>SP2E140E-PIR<br>SP2E160E-PIR<br>SP2E180E-PIR<br>SP2E200E-PIR | SP2D60E-PIR<br>SP2D80E-PIR<br>SP2D100E-PIR<br>SP2D120E-PIR |
| SP2B60E-PIR B<br>SP2B80E-PIR B<br>SP2B100E-PIR B<br>SP2B110E-PIR B<br>SP2B120E-PIR B<br>SP2B150E-PIR B | SP2E120E-PIR B<br>SP2E140E-PIR B<br>SP2E160E-PIR B<br>SP2E120E-PIR ENERGY<br>SP2E140E-PIR ENERGY<br>SP2E160E-PIR ENERGY<br>SP2E180E-PIR ENERGY<br>SP2E200E-PIR ENERGY | SP2C80/40E-PIR<br>SP2C100/60E-PIR<br>SP2C120/80E-PIR<br>SP2C140/100E-PIR<br>SP2C160/120E-PIR<br>SP2C190/150E-PIR<br>SP2C210/170E-PIR |
| SP2B100E-PIR ENERGY<br>SP2B110E-PIR ENERGY<br>SP2B120E-PIR ENERGY<br>SP2B150E-PIR ENERGY | SP2E120E-PIR B ENERGY<br>SP2E140E-PIR B ENERGY<br>SP2E160E-PIR B ENERGY | |
| SP2B100E-PIR B ENERGY<br>SP2B110E-PIR B ENERGY<br>SP2B120E-PIR B ENERGY<br>SP2B150E-PIR B ENERGY | | |

**Sandwich panel with E-PIRE polyisocyanurate core**

| | |
|---|---|
| SP2B80E-PIRE | SP2B80E-PIRE B |
| SP2B100E-PIRE | SP2B100E-PIRE B |
| SP2B110E-PIRE | SP2B110E-PIRE B |
| SP2B120E-PIRE | SP2B120E-PIRE B |

2. Intended use: Self-supporting metal faced insulating panels for use in buildings; external walls, internal walls, ceilings and roofs.

   Detailed intended use refers to the sandwich panel type – information in attachments to this declaration.

3. Manufacturer: Ruukki Polska Sp. z o.o.
   ul. Jaktorowska 13, 96-300 Żyrardów, Poland
   Oborniki branch
   ul. Łukowska 7, 64-600 Oborniki, Poland

4. Authorized representative: not applicable

| | | |
|---|---|---|
| 5. | AVCP level: | reaction to fire, fire resistance: 3; other properties: 4 |
| 6a. | Harmonised standard: | EN 14509:2013 “Self-supporting double skin metal faced insulating panels. Factory made products. Specifications” |
| | Notified body: | Instytut Techniki Budowlanej (ITB) (1488)<br>FIRES S.R.O. (1396)<br>Eurofins Expert Services Oy (0809) |
| 7. | Declared performances: | Technical product characteristics of specified product configuration are available in attachments to this Declaration of Performance. |

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

This Declaration of Performance is available on Ruukki web page:
https://www.ruukki.com/building-envelopes/services-support/sandwich-panel-support/declaration-of-performance-for-sandwich-panels

Signed for and on behalf of the manufacturer by:

Elżbieta Płaza
Certification Manager
Ruukki Construction

Helsinki, 12.10.2026

Declared technical characteristics of specified type of sandwich panel are available on the following pages:

**ENERGY PANELS:**

SP2B E-PIR Energy ..... Page 4
SP2B E-PIR B Energy ..... Page 5
SP2E E-PIR Energy ..... Page 6
SP2E E-PIR B Energy ..... Page 7

**OTHER PANELS:**

SP2B E-PIR ..... Page 8
SP2B E-PIR B ..... Page 9
SP2B E-PIRE ..... Page 10
SP2B E-PIRE B ..... Page 11
SP2D E-PIR ..... Page 12
SP2E E-PIR ..... Page 13
SP2E E-PIR B ..... Page 14
SP2C E-PIR ..... Page 15

**Attachment 1 to Declaration of Performance 29**

| **Panel type:** | **SP2B E-PIR ENERGY** | | | | | |
|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | |
| Intended use: | Internal or external walls | | | | | |
| **Panel name:** | **SP2B 100 E-PIR ENERGY** | **SP2B 110 E-PIR ENERGY** | **SP2B 120 E-PIR ENERGY** | **SP2B 150 E-PIR ENERGY** | Reference | |
| Year when CE mark was affixed: | 15 | 20 | 23 | 24 | | |
| Thickness of external facing: | 0,4* - 0,6 | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| External facing profile: | L25, L, M, F, R28, R275, R550 | | | | | |
| Thickness of internal facing: | 0,4* - 0,6 | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | | |
| Core material: | PIR | | | | | |
| Density of core material: | 37 | | | | kg/m$^3$ | |
| Nominal panel thickness: | 100 | 110 | 120 | 152.5 | mm | |
| Mass: | 12.3 | 12.6 | 13.0 | 14.2 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | |
| Tensile strength: | 0.10 | 0.10 | 0.10 | 0.10 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 3.00 | 2.65 | MPa | |
| Compressive strength (core): | 0.09 | 0.09 | 0.09 | 0.10 | MPa | |
| Creep coefficient t=2000h: | NPD | | | | | |
| Creep coefficient t=100000h: | NPD | | | | | |
| Wrinkling strength (external face) at profiling L25: | | | | | | |
| - in span | 165 | 165 | 165 | 165 | MPa | |
| - in span, elevated temperature | 150 | 150 | 150 | 150 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | |
| - in span | 145 | 145 | 145 | 140 | MPa | |
| - in span, elevated temperature | 130 | 130 | 130 | 125 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling F, R28, R275, R550: | | | | | | |
| - in span | 90 | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | |
| - in span | 165 | 165 | 165 | 165 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | | |
| - in span | 145 | 145 | 145 | 140 | MPa | |
| - at internal support | 115 | 115 | 115 | 103 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | | |
| - in span | 90 | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | MPa | |
| **Other properties:** | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.22 | 0.20 | 0.18 | 0.14 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | EI 15 | | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | EI 15 | | | | Class | (EN 13501-2) |
| External fire performance: | Not applicable | | | | | |
| Water permeability: | A | | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$): | n = 0,4812, C = 0,000972 | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$): | n = 0,1976, C = 0,002607 | | | | | (EN 12114) |
| Water vapour permeability: | Impermeable | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | |

* 0,4 mm facing is available only in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 2 to Declaration of Performance 29**

| **Panel type:** | **SP2B E-PIR B ENERGY** | | | | | |
|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | |
| Intended use: | Internal or external walls | | | | | |
| **Panel name:** | **SP2B 100 E-PIR B ENERGY** | **SP2B 110 E-PIR B ENERGY** | **SP2B 120 E-PIR B ENERGY** | **SP2B 150 E-PIR B ENERGY** | Reference | |
| Year when CE mark was affixed: | 18 | 20 | 23 | 24 | | |
| Thickness of external facing: | 0,4* - 0,6 | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| External facing profile: | L25, L, M, R500, R250, R28, F | | | | | |
| Thickness of internal facing: | 0,4* - 0,6 | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | | |
| Core material: | PIR | | | | | |
| Density of core material: | 37 | | | | kg/m$^3$ | |
| Nominal panel thickness: | 100 | 110 | 120 | 152.5 | mm | |
| Mass: | 12.3 | 12.7 | 13.1 | 14.3 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | |
| Tensile strength: | 0.10 | 0.10 | 0.10 | 0.10 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 3.00 | 2.65 | MPa | |
| Compressive strength (core): | 0.09 | 0.09 | 0.09 | 0.10 | MPa | |
| Creep coefficient t=2000h: | NPD | | | | | |
| Creep coefficient t=100000h: | NPD | | | | | |
| Wrinkling strength (external face) at profiling L25: | | | | | | |
| - in span | 165 | 165 | 165 | 165 | MPa | |
| - in span, elevated temperature | 150 | 150 | 150 | 150 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | |
| - in span | 145 | 145 | 145 | 140 | MPa | |
| - in span, elevated temperature | 130 | 130 | 130 | 125 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling R500, R250, R28, F: | | | | | | |
| - in span | 90 | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | |
| - in span | 165 | 165 | 165 | 165 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | | |
| - in span | 145 | 145 | 145 | 140 | MPa | |
| - at internal support | 115 | 115 | 115 | 103 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | | |
| - in span | 90 | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | MPa | |
| **Other properties:** | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.22 | 0.20 | 0.18 | 0.14 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | EI 15 | | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | EI 15 | | | | Class | (EN 13501-2) |
| External fire performance: | Not applicable | | | | | |
| Water permeability: | A | | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$): | n = 0,4812, C = 0,000972 | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$): | n = 0,1976, C = 0,002607 | | | | | (EN 12114) |
| Water vapour permeability: | Impermeable | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | |

* 0,4 mm facing is available only in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 3 to Declaration of Performance 29**

| **Panel type:** | **SP2E E-PIR ENERGY** | | | | | | |
|---|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | | |
| Intended use: | Internal or external walls | | | | | | |
| **Panel name:** | **SP2E 120 E-PIR ENERGY** | **SP2E 140 E-PIR ENERGY** | **SP2E 160 E-PIR ENERGY** | **SP2E 180 E-PIR ENERGY** | **SP2E 200 E-PIR ENERGY** | Reference | |
| Year when CE mark was affixed: | 15 | | | | | | |
| Thickness of external facing: | 0,5 - 0,6 | | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | (EN 10169) |
| External facing profile: | L25, L, M, F, R28, R275, R550 | | | | | | |
| Thickness of internal facing: | 0,4* - 0,6 | | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | | | |
| Core material: | PIR | | | | | | |
| Density of core material: | 37 | | | | | kg/m$^3$ | |
| Nominal panel thickness: | 120 | 140 | 160 | 180 | 200 | mm | |
| Mass: | 13.0 | 13.7 | 14.5 | 15.2 | 16.0 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | | |
| Tensile strength: | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 2.65 | 2.47 | 2.30 | MPa | |
| Compressive strength (core): | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | MPa | |
| Creep coefficient t=2000h: | NPD | | | | | | |
| Creep coefficient t=100000h: | NPD | | | | | | |
| Wrinkling strength (external face) at profiling L25: | | | | | | | |
| - in span | 165 | 165 | 165 | 165 | 165 | MPa | |
| - in span, elevated temperature | 150 | 150 | 150 | 150 | 150 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | | |
| - in span | 145 | 145 | 135 | 130 | 130 | MPa | |
| - in span, elevated temperature | 130 | 130 | 120 | 115 | 115 | MPa | |
| - at internal support | 115 | 115 | 103 | 103 | 103 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 92 | 92 | 92 | MPa | |
| Wrinkling strength (external face) at profiling F, R28, R275, R550: | | | | | | | |
| - in span | 90 | 90 | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | | |
| - in span | 165 | 165 | 165 | 165 | 165 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | | | |
| - in span | 145 | 145 | 135 | 130 | 130 | MPa | |
| - at internal support | 115 | 115 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | | | |
| - in span | 90 | 90 | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | 90 | MPa | |
| **Other properties:** | | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.18 | 0.16 | 0.14 | 0.12 | 0.11 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | EI 30 | | | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | EI 30 | | | | | Class | (EN 13501-2) |
| External fire performance: | Not applicable | | | | | | |
| Water permeability: | A | | | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$): | n = 1,1439, C = 0,000128 | | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$): | n = 0,5712, C = 0,007746 | | | | | | (EN 12114) |
| Water vapour permeability: | Impermeable | | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | | |

* 0,4 mm internal facing is available for 120 -160 mm thick panel in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 4 to Declaration of Performance 29**

| **Panel type:** | **SP2E E-PIR B ENERGY** | | | | |
|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | |
| Intended use: | Internal or external walls | | | | |
| **Panel name:** | **SP2E 120 E-PIR B ENERGY** | **SP2E 140 E-PIR B ENERGY** | **SP2E 160 E-PIR B ENERGY** | Reference | |
| Year when CE mark was affixed: | 18 | | | | |
| Thickness of external facing: | 0,5 - 0,6 | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | (EN 10169) |
| External facing profile: | L25, L, M, R500, R250, R28, F | | | | |
| Thickness of internal facing: | 0,4* - 0,6 | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | |
| Core material: | PIR | | | | |
| Density of core material: | 37 | | | kg/m$^3$ | |
| Nominal panel thickness: | 120 | 140 | 160 | mm | |
| Mass: | 13.1 | 13.8 | 14.6 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | |
| Tensile strength: | 0.10 | 0.10 | 0.10 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 2.65 | MPa | |
| Compressive strength (core): | 0.09 | 0.10 | 0.10 | MPa | |
| Creep coefficient t=2000h: | NPD | | | | |
| Creep coefficient t=100000h: | NPD | | | | |
| Wrinkling strength (external face) at profiling L25: | | | | | |
| - in span | 165 | 165 | 165 | MPa | |
| - in span, elevated temperature | 150 | 150 | 150 | MPa | |
| - at internal support | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | |
| - in span | 145 | 145 | 135 | MPa | |
| - in span, elevated temperature | 130 | 130 | 120 | MPa | |
| - at internal support | 115 | 115 | 103 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 92 | MPa | |
| Wrinkling strength (external face) at profiling R500, R250, R28, F: | | | | | |
| - in span | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | |
| - in span | 165 | 165 | 165 | MPa | |
| - at internal support | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | |
| - in span | 145 | 145 | 135 | MPa | |
| - at internal support | 115 | 115 | 103 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | |
| - in span | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | MPa | |
| **Other properties:** | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.18 | 0.16 | 0.14 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | EI 30 | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | EI 30 | | | Class | (EN 13501-2) |
| External fire performance: | Not applicable | | | | |
| Water permeability: | A | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$): | n = 1,1439, C = 0,000128 | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$): | n = 0,5712, C = 0,007746 | | | | (EN 12114) |
| Water vapour permeability: | Impermeable | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | |

* 0,4 mm internal facing is available only in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 5 to Declaration of Performance 29**

| **Panel type:** | **SP2B E-PIR** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | | | | |
| Intended use: | Internal or external walls, ceilings | | | | | | | | |
| **Panel name:** | **SP2B 40 E-PIR** | **SP2B 60 E-PIR** | **SP2B 80 E-PIR** | **SP2B 100 E-PIR** | **SP2B 110 E-PIR** | **SP2B 120 E-PIR** | **SP2B 150 E-PIR** | Reference | |
| Year when CE mark was affixed: | 15 | | | | 20 | 23 | 24 | | |
| Thickness of external facing: | 0,4* - 0,6 | | | | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | | | (EN 10169) |
| External facing profile: | L25, L, M, F, R28, R275, R550 | | | | | | | | |
| Thickness of internal facing: | 0,4** - 0,6 | | | | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | | | | | |
| Core material: | PIR | | | | | | | | |
| Density of core material: | 40 | 37 | | | | | | kg/m$^3$ | |
| Nominal panel thickness: | 40 | 60 | 80 | 100 | 110 | 120 | 152.5 | mm | |
| Mass: | 10.2 | 10.8 | 11.5 | 12.3 | 12.6 | 13.0 | 14.2 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | | | | |
| Tensile strength: | 0.09 | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 2.65 | MPa | |
| Compressive strength (core): | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.10 | MPa | |
| Creep coefficient t=2000h: | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | | |
| Creep coefficient t=100000h: | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | | |
| Wrinkling strength (external face) at profiling L25: | | | | | | | | | |
| - in span | 120 | 120 | 165 | 165 | 165 | 165 | 165 | MPa | |
| - in span, elevated temperature | 108 | 108 | 150 | 150 | 150 | 150 | 150 | MPa | |
| - at internal support | 110 | 110 | 115 | 115 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 99 | 99 | 103 | 103 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | | | | |
| - in span | 120 | 120 | 145 | 145 | 145 | 145 | 140 | MPa | |
| - in span, elevated temperature | 108 | 108 | 130 | 130 | 130 | 130 | 125 | MPa | |
| - at internal support | 110 | 110 | 124 | 124 | 124 | 124 | 103 | MPa | |
| - at internal support, elevated temperature | 99 | 99 | 111 | 111 | 111 | 111 | 92 | MPa | |
| Wrinkling strength (external face) at profiling F, R28, R275, R550: | | | | | | | | | |
| - in span | 90 | 90 | 90 | 90 | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | 81 | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | 81 | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | | | | |
| - in span | 120 | 120 | 165 | 165 | 165 | 165 | 165 | MPa | |
| - at internal support | 110 | 110 | 115 | 115 | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | | | | | |
| - in span | 120 | 120 | 145 | 145 | 145 | 145 | 140 | MPa | |
| - at internal support | 110 | 110 | 115 | 115 | 115 | 115 | 103 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | | | | | |
| - in span | 90 | 90 | 90 | 90 | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | 90 | 90 | 90 | MPa | |
| Resistance to repeated access load: | Passed | | | | | | | | |
| Resistance to point load: | NPD | | | 1.2 kN 5.0m | 1.2 kN 6.0 m | | | MPa | |
| **Other properties:** | | | | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.56 | 0.36 | 0.27 | 0.22 | 0.20 | 0.18 | 0.14 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | NPD | | | EI 15 | | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | NPD | | | EI 15 | | | | Class | (EN 13501-2) |
| Fire resistance (ceiling): | NPD | | | | | | | | |
| External fire performance: | Not applicable | | | | | | | | |
| Water permeability: | A | | | | | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$), panels with gasket: | n = 0,4812, C = 0,000972 | | | | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels with gasket: | n = 0,1976, C = 0,002607 | | | | | | | | (EN 12114) |
| Air permeability, pressure (per 1m$^2$), panels without gasket: | n = 0,5906, C = 0,006848 | | | | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels without gasket: | n = 0,4241, C = 0,019374 | | | | | | | | (EN 12114) |
| Water vapour permeability: | Impermeable | | | | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | | | | |

* 0,4 mm external facing is available for 80 -150 mm thick panel in L or L25 profiling
** 0,4 mm internal facing is available only in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 6 to Declaration of Performance 29**

| **Panel type:** | **SP2B E-PIR B** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | | | |
| Intended use: | Internal or external walls, ceilings | | | | | | | |
| **Panel name:** | **SP2B 60 E-PIR B** | **SP2B 80 E-PIR B** | **SP2B 100 E-PIR B** | **SP2B 110 E-PIR B** | **SP2B 120 E-PIR B** | **SP2B 150 E-PIR B** | Reference | |
| Year when CE mark was affixed: | 21 | 18 | | 20 | 23 | 24 | | |
| Thickness of external facing: | 0,4* - 0,6 | | | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | | (EN 10169) |
| External facing profile: | L25, L, M R500, R250, R28, F | | | | | | | |
| Thickness of internal facing: | 0,4** - 0,6 | | | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | | | | |
| Core material: | PIR | | | | | | | |
| Density of core material: | 37 | | | | | | kg/m$^3$ | |
| Nominal panel thickness: | 60 | 80 | 100 | 110 | 120 | 152.5 | mm | |
| Mass: | 10.8 | 11.6 | 12.3 | 12.7 | 13.1 | 14.3 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | | | |
| Tensile strength: | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 2.65 | MPa | |
| Compressive strength (core): | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.10 | MPa | |
| Creep coefficient t=2000h: | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | | |
| Creep coefficient t=100000h: | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | | |
| Wrinkling strength (external face) at profiling L25: | | | | | | | | |
| - in span | 120 | 165 | 165 | 165 | 165 | 165 | MPa | |
| - in span, elevated temperature | 108 | 150 | 150 | 150 | 150 | 150 | MPa | |
| - at internal support | 110 | 115 | 115 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 99 | 103 | 103 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | | | |
| - in span | 120 | 145 | 145 | 145 | 145 | 140 | MPa | |
| - in span, elevated temperature | 108 | 130 | 130 | 130 | 130 | 125 | MPa | |
| - at internal support | 110 | 115 | 115 | 115 | 115 | 103 | MPa | |
| - at internal support, elevated temperature | 99 | 103 | 103 | 103 | 103 | 92 | MPa | |
| Wrinkling strength (external face) at profiling R500, R250, R28, F: | | | | | | | | |
| - in span | 90 | 90 | 90 | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | | | |
| - in span | 120 | 165 | 165 | 165 | 165 | 165 | MPa | |
| - at internal support | 110 | 115 | 115 | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | | | | |
| - in span | 120 | 145 | 145 | 140 | 140 | 140 | MPa | |
| - at internal support | 110 | 115 | 115 | 115 | 115 | 103 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | | | | |
| - in span | 90 | 90 | 90 | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | 90 | 90 | MPa | |
| Resistance to repeated access load: | Passed | | | | | | | |
| Resistance to point load: | NPD | | 1.2 kN 5.0m | 1.2 kN 6.0 m | | | | |
| **Other properties:** | | | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.36 | 0.27 | 0.22 | 0.20 | 0.18 | 0.14 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | NPD | | EI 15 | | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | NPD | | EI 15 | | | | Class | (EN 13501-2) |
| Fire resistance (ceiling): | NPD | | | | | | | |
| External fire performance: | Not applicable | | | | | | | |
| Water permeability: | A | | | | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$), panels with gasket: | n = 0,4812, C = 0,000972 | | | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels with gasket: | n = 0,1976, C = 0,002607 | | | | | | | (EN 12114) |
| Air permeability, pressure (per 1m$^2$), panels without gasket: | n = 0,5906, C = 0,006848 | | | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels without gasket: | n = 0,4241, C = 0,019374 | | | | | | | (EN 12114) |
| Water vapour permeability: | Impermeable | | | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | | | |

* 0,4 mm external facing is available for 80 -150 mm thick panel in L or L25 profiling
** 0,4 mm internal facing is available only in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 7 to Declaration of Performance 29**

| **Panel type:** | **SP2B E-PIRE** | | | | | |
|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | |
| Intended use: | Internal or external walls | | | | | |
| **Panel name:** | **SP2B 80 E-PIRE** | **SP2B 100 E-PIRE** | **SP2B 110 E-PIRE** | **SP2B 120 E-PIRE** | Reference | |
| Year when CE mark was affixed: | 18 | | 20 | 23 | | |
| Thickness of external facing: | 0,4* - 0,6 | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| External facing profile: | L25, L, M | | | | | |
| Thickness of internal facing: | 0,4 - 0,6 | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| Internal facing profile: | L25 | | | | | |
| Core material: | PIR | | | | | |
| Density of core material: | 35 | | | | kg/m$^3$ | |
| Nominal panel thickness: | 80 | 100 | 110 | 120 | mm | |
| Mass: | 11.4 | 12.1 | 12.4 | 12.8 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | |
| Tensile strength: | 0.08 | 0.08 | 0.08 | 0.08 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.0 | 3.0 | 3.0 | 3.0 | MPa | |
| Compressive strength (core): | 0.07 | 0.07 | 0.07 | 0.07 | MPa | |
| Creep coefficient t=2000h: | NPD | | | | | |
| Creep coefficient t=100000h: | NPD | | | | | |
| Wrinkling strength (external face) at profiling L25: | | | | | | |
| - in span | 145 | 145 | 145 | 145 | MPa | |
| - in span, elevated temperature | 130 | 130 | 130 | 130 | MPa | |
| - at internal support | 95 | 95 | 95 | 95 | MPa | |
| - at internal support, elevated temperature | 80 | 80 | 80 | 80 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | |
| - in span | 120 | 120 | 120 | 120 | MPa | |
| - in span, elevated temperature | 108 | 108 | 108 | 108 | MPa | |
| - at internal support | 80 | 80 | 80 | 80 | MPa | |
| - at internal support, elevated temperature | 70 | 70 | 70 | 70 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | |
| - in span | 145 | 145 | 145 | 145 | MPa | |
| - at internal support | 100 | 100 | 100 | 100 | MPa | |
| **Other properties:** | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.27 | 0.22 | 0.20 | 0.18 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | NPD | EI 15 | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | NPD | | | | | |
| External fire performance: | Not applicable | | | | | |
| Water permeability: | A | | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$), panels with gasket: | n = 0,4812, C = 0,000972 | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels with gasket: | n = 0,1976, C = 0,002607 | | | | | (EN 12114) |
| Air permeability, pressure (per 1m$^2$), panels without gasket: | n = 0,5906, C = 0,006848 | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels without gasket: | n = 0,4241, C = 0,019374 | | | | | (EN 12114) |
| Water vapour permeability: | Impermeable | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | |

* 0,4 mm facing is available only in L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 8 to Declaration of Performance 29**

| **Panel type** | **SP2B E-PIRE B** | | | | | |
|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | |
| Intended use: | Internal or external walls | | | | | |
| **Panel name:** | **SP2B 80 E-PIRE B** | **SP2B 100 E-PIRE B** | **SP2B 110 E-PIRE B** | **SP2B 120 E-PIRE B** | Reference | |
| Year when CE mark was affixed: | 18 | | 20 | 23 | | |
| Thickness of external facing: | 0,40* - 0,60 | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| External facing profile: | L25, L, M | | | | | |
| Thickness of internal facing: | 0,40 - 0,60 | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| Internal facing profile: | L25 | | | | | |
| Core material: | PIR | | | | | |
| Density of core material: | 35 | | | | kg/m$^3$ | |
| Nominal panel thickness: | 80 | 100 | 110 | 120 | mm | |
| Mass: | 11.4 | 12.1 | 12.5 | 12.8 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | |
| Tensile strength: | 0.08 | 0.08 | 0.08 | 0.08 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.0 | 3.0 | 3.0 | 3.0 | MPa | |
| Compressive strength (core): | 0.07 | 0.07 | 0.07 | 0.07 | MPa | |
| Creep coefficient t=2000h: | NPD | | | | | |
| Creep coefficient t=100000h: | NPD | | | | | |
| Wrinkling strength (external face) at profiling L25: | | | | | | |
| - in span | 145 | 145 | 145 | 145 | MPa | |
| - in span, elevated temperature | 130 | 130 | 130 | 130 | MPa | |
| - at internal support | 95 | 95 | 95 | 95 | MPa | |
| - at internal support, elevated temperature | 80 | 80 | 80 | 80 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | |
| - in span | 120 | 120 | 120 | 120 | MPa | |
| - in span, elevated temperature | 108 | 108 | 108 | 108 | MPa | |
| - at internal support | 80 | 80 | 80 | 80 | MPa | |
| - at internal support, elevated temperature | 70 | 70 | 70 | 70 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | |
| - in span | 145 | 145 | 145 | 145 | MPa | |
| - at internal support | 100 | 100 | 100 | 100 | MPa | |
| **Other properties:** | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.27 | 0.22 | 0.20 | 0.18 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | NPD | EI 15 | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | NPD | | | | | |
| External fire performance: | Not applicable | | | | | |
| Water permeability: | A | | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$), panels with gasket: | n = 0,4812, C = 0,000972 | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels with gasket: | n = 0,1976, C = 0,002607 | | | | | (EN 12114) |
| Air permeability, pressure (per 1m$^2$), panels without gasket: | n = 0,5906, C = 0,006848 | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels without gasket: | n = 0,4241, C = 0,019374 | | | | | (EN 12114) |
| Water vapour permeability: | Impermeable | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | |

* 0,4 mm facing is available only in L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 9 to Declaration of Performance 29**

| **Panel type** | **SP2D E-PIR** | | | | | |
|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | |
| Intended use: | External walls | | | | | |
| **Panel name:** | **SP2D 60 E-PIR** | **SP2D 80 E-PIR** | **SP2D 100 E-PIR** | **SP2D 120 E-PIR** | Reference | |
| Year when CE mark was affixed: | 15 | | | | | |
| Thickness of external facing: | 0,5 - 0,6 | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| External facing profile: | L, M, R500, R250, R28, F | | | | | |
| Thickness of internal facing: | 0,4* - 0,6 | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | | |
| Core material: | PIR | | | | | |
| Density of core material: | 38 | | | | kg/m$^3$ | |
| Nominal panel thickness: | 60 | 80 | 100 | 120 | mm | |
| Mass: | 11.2 | 12.0 | 12.8 | 13.5 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | |
| Tensile strength: | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 3.00 | 3.00 | MPa | |
| Compressive strength (core): | 0.085 | 0.085 | 0.085 | 0.085 | MPa | |
| Creep coefficient t=2000h: | NPD | | | | | |
| Creep coefficient t=100000h: | NPD | | | | | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | |
| - in span | 120 | 140 | 140 | 140 | MPa | |
| - in span, elevated temperature | 108 | 126 | 126 | 126 | MPa | |
| - at internal support | 110 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 99 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling R500, R250, R28, F: | | | | | | |
| - in span | 90 | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | |
| - in span | 140 | 165 | 165 | 165 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | | |
| - in span | 120 | 140 | 140 | 140 | MPa | |
| - at internal support | 110 | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | | |
| - in span | 90 | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | MPa | |
| **Other properties:** | | | | | | |
| Thermal transmittance, $U_{d.s}$: | 0.38 | 0.28 | 0.22 | 0.18 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | | |
| Fire resistance (wall, horizontal): | NPD | | | | | |
| Fire resistance (wall, vertical): | NPD | | EI 15-ef (i→o) / EI 15-ef (o→i) | | Class | (EN 13501-2) |
| External fire performance: | Not applicable | | | | | |
| Water permeability: | A | | | | Class | (EN 12865) |
| Air permeability: | NPD | | | | | |
| Water vapour permeability: | Impermeable | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | |

* 0,4 mm facing is available only in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 10 to Declaration of Performance 29**

| **Panel type** | **SP2E E-PIR** | | | | | | |
|---|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | | |
| Intended use: | Internal or external walls, ceilings | | | | | | |
| **Panel name:** | **SP2E 120 E-PIR** | **SP2E 140 E-PIR** | **SP2E 160 E-PIR** | **SP2E 180 E-PIR** | **SP2E 200 E-PIR** | Reference | |
| Year when CE mark was affixed: | 15 | | | | | | |
| Thickness of external facing: | 0,5 - 0,6 | | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | (EN 10169) |
| External facing profile: | L25, L, M, F, R28, R275, R550 | | | | | | |
| Thickness of internal facing: | 0,4* - 0,6 | | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | | | |
| Core material: | PIR | | | | | | |
| Density of core material: | 37 | | | | | kg/m$^3$ | |
| Nominal panel thickness: | 120 | 140 | 160 | 180 | 200 | mm | |
| Mass: | 13.0 | 13.7 | 14.5 | 15.2 | 16.0 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | | |
| Tensile strength: | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 2.65 | 2.47 | 2.30 | MPa | |
| Compressive strength (core): | 0.09 | 0.10 | 0.10 | 0.10 | 0.10 | MPa | |
| Creep coefficient t=2000h: | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | | |
| Creep coefficient t=100000h: | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | | |
| Wrinkling strength (external face) at profiling L25: | | | | | | | |
| - in span | 165 | 165 | 165 | 165 | 165 | MPa | |
| - in span, elevated temperature | 150 | 150 | 150 | 150 | 150 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | | | |
| - in span | 145 | 145 | 135 | 130 | 130 | MPa | |
| - in span, elevated temperature | 130 | 130 | 120 | 115 | 115 | MPa | |
| - at internal support | 115 | 115 | 103 | 103 | 103 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 92 | 92 | 92 | MPa | |
| Wrinkling strength (external face) at profiling F, R28, R275, R550: | | | | | | | |
| - in span | 90 | 90 | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | | |
| - in span | 165 | 165 | 165 | 165 | 165 | MPa | |
| - at internal support | 115 | 115 | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | | | |
| - in span | 145 | 145 | 135 | 130 | 130 | MPa | |
| - at internal support | 115 | 115 | 103 | 103 | 103 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | | | |
| - in span | 90 | 90 | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | 90 | 90 | MPa | |
| Resistance to repeated access load: | Passed | | | | | | |
| Resistance to point load: | 1.2 kN 6.0 m | | | | | | |
| **Other properties:** | | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.18 | 0.16 | 0.14 | 0.12 | 0.11 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | | Class | (EN 13501-1) |
| Fire resistance (wall): | EI 30 | | | | | Class | (EN 13501-2) |
| Fire resistance (wall): | EI 30 | | | | | Class | (EN 13501-2) |
| Fire resistance (ceiling): | EI 30 | | | | | | |
| External fire performance: | Not applicable | | | | | | |
| Water permeability: | A | | | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$), panels with gasket: | n = 1,1439, C = 0,000128 | | | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels with gasket: | n = 0,5712, C = 0,007746 | | | | | | (EN 12114) |
| Air permeability, panels without gasket: | NPD | | | | | | |
| Water vapour permeability: | Impermeable | | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | | |

* 0,4 mm internal facing is available for 120 -160 mm thick panel in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 11 to Declaration of Performance 29**

| **Panel type** | **SP2E E-PIR B** | | | | |
|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | |
| Intended use: | Internal or external walls, ceilings | | | | |
| **Panel name:** | **SP2E 120 E-PIR B** | **SP2E 140 E-PIR B** | **SP2E 160 E-PIR B** | Reference | |
| Year when CE mark was affixed: | 18 | | | | |
| Thickness of external facing: | 0,5 - 0,6 | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | (EN 10169) |
| External facing profile: | L25, L, M, R500, R250, R28, F | | | | |
| Thickness of internal facing: | 0,4* - 0,6 | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | (EN 10169) |
| Internal facing profile: | L25, L, F | | | | |
| Core material: | PIR | | | | |
| Density of core material: | 37 | | | kg/m$^3$ | |
| Nominal panel thickness: | 120 | 140 | 160 | mm | |
| Mass: | 13.1 | 13.8 | 14.6 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | |
| Tensile strength: | 0.10 | 0.10 | 0.10 | MPa | |
| Shear strength: | 0.09 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.036 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 2.65 | MPa | |
| Compressive strength (core): | 0.09 | 0.10 | 0.10 | MPa | |
| Creep coefficient t=2000h: | 2.4 | 2.4 | 2.4 | | |
| Creep coefficient t=100000h: | 7.0 | 7.0 | 7.0 | | |
| Wrinkling strength (external face) at profiling L25: | | | | | |
| - in span | 165 | 165 | 165 | MPa | |
| - in span, elevated temperature | 150 | 150 | 150 | MPa | |
| - at internal support | 115 | 115 | 115 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 103 | MPa | |
| Wrinkling strength (external face) at profiling L, M: | | | | | |
| - in span | 145 | 145 | 135 | MPa | |
| - in span, elevated temperature | 130 | 130 | 120 | MPa | |
| - at internal support | 115 | 115 | 103 | MPa | |
| - at internal support, elevated temperature | 103 | 103 | 92 | MPa | |
| Wrinkling strength (external face) at profiling R500, R250, R28, F: | | | | | |
| - in span | 90 | 90 | 90 | MPa | |
| - in span, elevated temperature | 81 | 81 | 81 | MPa | |
| - at internal support | 90 | 90 | 90 | MPa | |
| - at internal support, elevated temperature | 81 | 81 | 81 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | |
| - in span | 165 | 165 | 165 | MPa | |
| - at internal support | 115 | 115 | 115 | MPa | |
| Wrinkling strength (internal face) at profiling L: | | | | | |
| - in span | 145 | 145 | 135 | MPa | |
| - at internal support | 115 | 115 | 103 | MPa | |
| Wrinkling strength (internal face) at profiling F: | | | | | |
| - in span | 90 | 90 | 90 | MPa | |
| - at internal support | 90 | 90 | 90 | MPa | |
| Resistance to repeated access load: | Passed | | | | |
| Resistance to point load: | 1.2 kN 6.0 m | | | | |
| **Other properties:** | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.18 | 0.16 | 0.14 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | Class | (EN 13501-1) |
| Fire resistance (wall, horizontal): | EI 30 | | | Class | (EN 13501-2) |
| Fire resistance (wall, vertical): | EI 30 | | | Class | (EN 13501-2) |
| Fire resistance (ceiling): | EI 30 | | | | |
| External fire performance: | Not applicable | | | | |
| Water permeability: | A | | | Class | (EN 12865) |
| Air permeability, pressure (per 1m$^2$), panels with gasket: | n = 1,1439, C = 0,000128 | | | | (EN 12114) |
| Air permeability, suction (per 1m$^2$), panels with gasket: | n = 0,5712, C = 0,007746 | | | | (EN 12114) |
| Air permeability, panels without gasket: | NPD | | | | |
| Water vapour permeability: | Impermeable | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | |

* 0,4 mm internal facing is available only in L or L25 profiling

Detailed product/material specification is given on order confirmation or delivery documentation.

**Attachment 12 to Declaration of Performance 29**

| **Panel type** | **SP2C E-PIR** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Reference to harmonized standard: | EN 14509:2013 | | | | | | | | |
| Intended use: | Roof panel | | | | | | | | |
| **Panel name:** | **SP2C 80/40 E-PIR** | **SP2C 100/60 E-PIR** | **SP2C 120/80 E-PIR** | **SP2C 140/100 E-PIR** | **SP2C 160/120 E-PIR** | **SP2C 190/150 E-PIR** | **SP2C 210/170 E-PIR** | Reference | |
| Year when CE mark was affixed: | 15 | | | | | 20 | 15 | | |
| Thickness of external facing: | 0,5 - 0,6 | | | | | | | mm | (EN 10143) |
| External facing - steel grade: | S280GD+Z275, S280GD+ZM140, S280GD+ZM120, S280GD+ZA255<br>S250GD+Z275, S250GD+ZM140, S250GD+ZM120, S250GD+ZA255 | | | | | | | | (EN 10346) |
| Coating of external facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | | | (EN 10169) |
| External facing profile: | T | | | | | | | | |
| Thickness of internal facing: | 0,4 - 0,6 | | | | | | | mm | (EN 10143) |
| Internal facing - steel grade: | S280GD+Z275, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095<br>S250GD+Z275, S250GD+ZA255, S250GD+Z100, S250GD+ZM140, S250GD+ZM120, S250GD+ZM100, S250GD+ZA095 | | | | | | | | (EN 10346) |
| Coating of internal facing: | Polyester, GreenCoat Hiarc max, GreenCoat Pural BT Satin, GreenCoat Pural BT Metallic or other colour coating with PCS ≤ 4,0 MJ/m$^2$ | | | | | | | | (EN 10169) |
| Internal facing profile: | L25 | | | | | | | | |
| Core material: | PIR | | | | | | | | |
| Density of core material: | 37 | | | | | | | kg/m$^3$ | |
| Nominal panel thickness: | 40 | 60 | 80 | 100 | 120 | 150 | 170 | mm | |
| Mass: | 10.5 | 11.2 | 11.9 | 12.7 | 13.4 | 14.5 | 15.3 | kg/m$^2$ | |
| **Mechanical resistance:** | | | | | | | | | |
| Tensile strength: | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | MPa | |
| Shear strength: | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.09 | 0.09 | MPa | |
| Reduced long term shear strength: | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.036 | 0.036 | MPa | |
| Shear modulus (core): | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 2.50 | 2.00 | MPa | |
| Compressive strength (core): | 0.09 | 0.09 | 0.08 | 0.085 | 0.085 | 0.09 | 0.09 | MPa | |
| Creep coefficient t=2000h: | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | | |
| Creep coefficient t=100000h: | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | | |
| Wrinkling strength (external face) at profiling T: | | | | | | | | | |
| - in span | 250 | 250 | 250 | 250 | 250 | 230 | 215 | MPa | |
| - in span, elevated temperature | 250 | 250 | 250 | 250 | 250 | 230 | 215 | MPa | |
| - at internal support | 230 | 230 | 230 | 230 | 230 | 210 | 200 | MPa | |
| - at internal support, elevated temperature | 230 | 230 | 230 | 230 | 230 | 210 | 200 | MPa | |
| Wrinkling strength (internal face) at profiling L25: | | | | | | | | | |
| - in span | 125 | 120 | 115 | 110 | 110 | 105 | 100 | MPa | |
| - at internal support | 105 | 105 | 105 | 99 | 99 | 94 | 87 | MPa | |
| Resistance to repeated access load: | Not suitable for occasional foot traffic for access or maintenance | | | | | | | | |
| **Other properties:** | | | | | | | | | |
| Thermal transmittance, $U_{d,s}$: | 0.50 | 0.34 | 0.26 | 0.21 | 0.18 | 0.15 | 0.13 | W/m$^2$K | |
| Thermal conductivity of the core, $\lambda_{Declared}$: | 0.022 | | | | | | | W/mK | |
| Reaction to fire: | B-s2, d0 | | | | | | | Class | (EN 13501-1) |
| Fire resistance: | NPD | | REI 20 / RE 30 | | | | | Class | (EN 13501-2) |
| External fire performance: | $B_{ROOF}$ (t1, t2, t3) | | | | | | | Class | (CWFT) |
| Water permeability: | A | | | | | | | Class | (EN 12865) |
| Air permeability: | NPD | | | | | | | | |
| Water vapour permeability: | Impermeable | | | | | | | | |
| Airborne sound insulation, $R_w$ (C; $C_{tr}$): | 24 (-2; -4) | | | | | | | dB | (EN ISO 717-1) |
| Sound absorption, $\alpha_w$: | 0.10 | | | | | | | | (EN ISO 11654) |
| Durability: | Pass - all colours | | | | | | | | |

Detailed product/material specification is given on order confirmation or delivery documentation.