



DECLARATION OF PERFORMANCE

No. 37/PIR/OBO

1. Unique identification code of product-type:

E-PIR sandwich panel with polyisocyanurate core and stainless steel facings

SP2B 60 E-PIR	SP2B 100 E-PIR ENERGY
SP2B 80 E-PIR	SP2B 110 E-PIR ENERGY
SP2B 100 E-PIR	SP2B 120 E-PIR ENERGY
SP2B 110 E-PIR	
SP2B 120 E-PIR	

X-PIR sandwich panel with polyisocyanurate core and stainless steel facings

SP2B 100 X-PIR	SP2B 100 X-PIR ENERGY	SP2E 120 X-PIR	SP2E 120 X-PIR ENERGY
SP2B 110 X-PIR	SP2B 110 X-PIR ENERGY	SP2E 140 X-PIR	SP2E 140 X-PIR ENERGY
SP2B 120 X-PIR	SP2B 120 X-PIR ENERGY	SP2E 160 X-PIR	SP2E 160 X-PIR ENERGY
		SP2E 180 X-PIR	SP2E 180 X-PIR ENERGY
		SP2E 200 X-PIR	SP2E 200 X-PIR ENERGY

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

3. Manufacturer: Ruukki Polska Sp. z o.o.
Ul. Jaktorowska 13, 96-300 Żyrardów, Poland
Oborniki branch
Ul. Łukowska 7/9, 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)
FIRES S.R.O. (1396)

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:

<http://www.ruukki.com/b2b/support/certificates-and-declarations/sandwich-panel-certificates-and-approvals>

Signed for and on behalf of the manufacturer by:

A handwritten signature in purple ink that reads "Adam Korol". The signature is fluid and cursive, with the first name "Adam" and last name "Korol" clearly distinguishable.

Adam Korol
Senior Vice President
Building Components

Helsinki, 09.02.2024

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

ENERGY PANELS:

SP2B E-PIR Energy		Page 4
SP2B X-PIR Energy		Page 5
SP2E X-PIR Energy		Page 6

OTHER PANELS:

SP2B E-PIR		Page 7
SP2B X-PIR		Page 8
SP2E X-PIR		Page 9

Attachment 1 to Declaration of Performance 37/PIR/OBO

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	Reference	
Year when CE mark was affixed:	15	20	23		
Thickness of external facing:	0.5			mm	(EN ISO 9445-2)
External facing - steel grade:	1.4301, 1.4404				(EN 10088-4)
Coating of external facing:	Not applicable				
External facing profile:	L				
Thickness of internal facing:	0.5			mm	(EN ISO 9445-2)
Internal facing - steel grade:	1.4301, 1.4404				(EN 10088-4)
Coating of internal facing:	Not applicable				
Internal facing profile:	L				
Core material:	PIR				
Density of core material:	38.5			kg/m ³	
Nominal panel thickness:	100	110	120	mm	
Mass:	12.4	12.7	13.0	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	3.00	MPa	
Compressive strength (core):	0.09	0.09	0.09	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):					
- in span	135	135	135	MPa	
- in span, elevated temperature	121	121	121	MPa	
- at central support	115	115	115	MPa	
- at central support, elevated temperature	103	103	103	MPa	
Wrinkling strength (internal face):					
- in span	135	135	135	MPa	
- at internal support	115	115	115	MPa	
Other properties:					
Thermal transmittance, U _{g,s} :	0.22	0.20	0.18	W/m ² K	
Thermal conductivity of the core, λ _{Declared} :	0.022			W/mK	
Reaction to fire:	B-s2,d0			Class	(EN 13501-1)
Fire resistance:	NPD				
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 = 0,00261				(EN 12114)
Water vapour permeability:	Impermeable				
Airborne sound insulation, R _w (C; C _{tr}):	25 (-2; -4)			dB	(EN ISO 717-1)
Sound absorption, α _w :	0.10				(EN ISO 11654)
Durability:	Pass - all colours				

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

Attachment 2 to Declaration of Performance 37/PIR/OBO

Panel type	SP2B X-PIR ENERGY				
Reference to harmonized standard:	EN 14509:2013				
Intended use:	Internal or external walls				
Panel name:	SP2B 100 X-PIR ENERGY	SP2B 110 X-PIR ENERGY	SP2B 120 X-PIR ENERGY	Reference	
Year when CE mark was affixed:	15	20	23		
Thickness of external facing:	0.5			mm	(EN ISO 9445-2)
External facing - steel grade:	1.4301, 1.4404				(EN 10088-4)
Coating of external facing:	Not applicable				
External facing profile:	L				
Thickness of internal facing:	0.5			mm	(EN ISO 9445-2)
Internal facing - steel grade:	1.4301, 1.4404				(EN 10088-4)
Coating of internal facing:	Not applicable				
Internal facing profile:	L				
Core material:	PIR				
Density of core material:	38.5			kg/m ³	
Nominal panel thickness:	100	110	120	mm	
Mass:	12.4	12.7	13.0	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	3.00	MPa	
Compressive strength (core):	0.09	0.09	0.09	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):					
- in span	135	135	135	MPa	
- in span, elevated temperature	121	121	121	MPa	
- at central support	115	115	115	MPa	
- at central support, elevated temperature	103	103	103	MPa	
Wrinkling strength (internal face):					
- in span	135	135	135	MPa	
- at internal support	115	115	115	MPa	
Other properties:					
Thermal transmittance, U _{g,s} :	0.22	0.20	0.18	W/m ² K	
Thermal conductivity of the core, λ _{Declared} :	0.022			W/mK	
Reaction to fire:	B-s1,d0			Class	(EN 13501-1)
Fire resistance:	NPD				
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 = 0,00261				(EN 12114)
Water vapour permeability:	Impermeable				
Airborne sound insulation, R _w (C; C _w):	25 (-2; -4)			dB	(EN ISO 717-1)
Sound absorption, α _w :	0.10				(EN ISO 11654)
Durability:	Pass - all colours				

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

Attachment 3 to Declaration of Performance 37/PIR/OBO

Panel type	SP2E X-PIR ENERGY					
Reference to harmonized standard:	EN 14509:2013					
Intended use:	Internal or external walls					
Panel thickness:	SP2E 120 X-PIR ENERGY	SP2E 140 X-PIR ENERGY	SP2E 160 X-PIR ENERGY	SP2E 180 X-PIR ENERGY	SP2E 200 X-PIR ENERGY	Reference
Year when CE mark was affixed:	22					
Thickness of external facing:	0.5					mm (EN ISO 9445-2)
External facing - steel grade:	1.4301, 1.4404					(EN 10088-4)
Coating of external facing:	Not applicable					
External facing profile:	L					
Thickness of internal facing:	0.5					mm (EN ISO 9445-2)
Internal facing - steel grade:	1.4301, 1.4404					(EN 10088-4)
Coating of internal facing:	Not applicable					
Internal facing profile:	L					
Core material:	PIR					
Density of core material:	38.5					kg/m ³
Nominal panel thickness:	120	143	160	180	200	mm
Mass:	13.1	13.9	14.6	15.4	16.2	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	2.65	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):						
- in span	135	135	120	120	120	MPa
- in span, elevated temperature	115	115	108	108	108	MPa
- at central support	103	103	100	100	100	MPa
- at central support, elevated temperature	92	92	90	90	90	MPa
Wrinkling strength (internal face):						
- in span	135	135	120	120	120	MPa
- at internal support	103	103	100	100	100	MPa
Other properties:						
Thermal transmittance, U _{g,s} :	0.18	0.15	0.14	0.12	0.11	W/m ² K
Thermal conductivity of the core, λ _{Declared} :	0.022					W/mK
Reaction to fire:	B-s1, d0					Class (EN 13501-1)
Fire resistance (wall, horizontal):	NPD					
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 = 0,00775					(EN 12114)
Water vapour permeability:	Impermeable					
Airborne sound insulation, R _w (C; C _w):	25 (-2; -4)					dB (EN ISO 717-1)
Sound absorption, α _w :	0.10					(EN ISO 11654)
Durability:	Pass - all colours					

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

Attachment 4 to Declaration of Performance 37/PIR/OBO

Panel type	SP2B E-PIR						
Reference to harmonized standard:	EN 14509:2013						
Intended use:	Internal or external walls, ceilings						
Panel name:	SP2B 60 E-PIR	SP2B 80 E-PIR	SP2B 100 E-PIR	SP2B 110 E-PIR	SP2B 120 E-PIR	Reference	
Year when CE mark was affixed:	15			20		23	
Thickness of external facing:	0.5					mm	(EN ISO 9445-2)
External facing - steel grade:	1.4301, 1.4404						(EN 10088-4)
Coating of external facing:	Not applicable						
External facing profile:	L						
Thickness of internal facing:	0.5					mm	(EN ISO 9445-2)
Internal facing - steel grade:	1.4301, 1.4404						(EN 10088-4)
Coating of internal facing:	Not applicable						
Internal facing profile:	L						
Core material:	PIR						
Density of core material:	38.5					kg/m³	
Nominal panel thickness:	60	80	100	110	120	mm	
Mass:	10.8	11.5	12.3	12.7	13.0	kg/m²	
Mechanical resistance:							
Tensile strength:	0.09	0.09	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	3.00	3.00	3.00	MPa	
Compressive strength (core):	0.09	0.09	0.09	0.09	0.09	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):							
- in span	120	120	135	135	135	MPa	
- in span, elevated temperature	108	108	121	121	121	MPa	
- at central support	110	110	115	115	115	MPa	
- at central support, elevated temperature	99	99	103	103	103	MPa	
Wrinkling strength (internal face):							
- in span	120	120	135	135	135	MPa	
- at internal support	110	110	115	115	115	MPa	
Resistance to repeated access load:	Not suitable for occasional foot traffic for access or maintenance						
Other properties:							
Thermal transmittance, U _{d,s} :	0.36	0.27	0.22	0.20	0.18	W/m²K	
Thermal conductivity of the core, λ _{Declared} :	0.022					W/mK	
Reaction to fire:	B-s2,d0					Class	(EN 13501-1)
Fire resistance (wall):	NPD						
Fire resistance (ceiling):	NPD						
External fire performance:	Not applicable						
Water permeability:	A					Class	(EN 12865)
Air permeability, pressure (per 1m²):	NPD						(EN 12114)
Water vapour permeability:	Impermeable						
Airborne sound insulation, R _w (C; C _w):	25 (-2; -4)					dB	(EN ISO 717-1)
Sound absorption, α _w :	0.10						(EN ISO 11654)
Durability:	Pass - all colours						

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

Attachment 5 to Declaration of Performance 37/PIR/OBO

Panel type	SP2B X-PIR				
Reference to harmonized standard:	EN 14509:2013				
Intended use:	Internal or external walls, ceilings				
Panel name:	SP2B 100 X-PIR	SP2B 110 X-PIR		SP2B 120 X-PIR	Reference
Year when CE mark was affixed:	15	20		23	
Thickness of external facing:	0.5				mm (EN ISO 9445-2)
External facing - steel grade:	1.4301, 1.4404				(EN 10088-4)
Coating of external facing:	Not applicable				
External facing profile:	L				
Thickness of internal facing:	0.5				mm (EN ISO 9445-2)
Internal facing - steel grade:	1.4301, 1.4404				(EN 10088-4)
Coating of internal facing:	Not applicable				
Internal facing profile:	L				
Core material:	PIR				
Density of core material:	38.5				kg/m ³
Nominal panel thickness:	100	110	120	mm	
Mass:	12.4	12.7	13.0	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	3.00	MPa	
Compressive strength (core):	0.09	0.09	0.09	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):					
- in span	135	135	135	MPa	
- in span, elevated temperature	121	121	121	MPa	
- at central support	115	115	115	MPa	
- at central support, elevated temperature	103	103	103	MPa	
Wrinkling strength (internal face):					
- in span	135	135	135	MPa	
- at internal support	115	115	115	MPa	
Resistance to repeated access load:	Not suitable for occasional foot traffic for access or maintenance				
Other properties:					
Thermal transmittance, U _{d,s} :	0.22	0.20	0.18	W/m ² K	
Thermal conductivity of the core, λ _{Declared} :	0.022				W/mK
Reaction to fire:	B-s1,d0				Class (EN 13501-1)
Fire resistance (wall):	NPD				
Fire resistance (ceiling):	NPD				
External fire performance:	Not applicable				
Water permeability:	A				Class (EN 12865)
Air permeability, pressure (per 1m ²):	NPD				(EN 12114)
Water vapour permeability:	Impermeable				
Airborne sound insulation, R _w (C; C _w):	25 (-2; -4)				dB (EN ISO 717-1)
Sound absorption, α _w :	0.10				(EN ISO 11654)
Durability:	Pass - all colours				

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

Attachment 6 to Declaration of Performance 37/PIR/OBO

Panel type	SP2E X-PIR					
Reference to harmonized standard:	EN 14509:2013					
Intended use:	Internal or external walls, ceilings					
Panel thickness:	SP2E 120 X-PIR	SP2E 140 X-PIR	SP2E 160 X-PIR	SP2E 180 X-PIR	SP2E 200 X-PIR	Reference
Year when CE mark was affixed:	22					
Thickness of external facing:	0.5					mm (EN ISO 9445-2)
External facing - steel grade:	1.4301, 1.4404					(EN 10088-4)
Coating of external facing:	Not applicable					
External facing profile:	L					
Thickness of internal facing:	0.5					mm (EN ISO 9445-2)
Internal facing - steel grade:	1.4301, 1.4404					(EN 10088-4)
Coating of internal facing:	Not applicable					
Internal facing profile:	L					
Core material:	PIR					
Density of core material:	38.5					kg/m ³
Nominal panel thickness:	120	143	160	180	200	mm
Mass:	13.1	13.9	14.6	15.4	16.2	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	2.65	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):						
- in span	135	135	120	120	120	MPa
- in span, elevated temperature	115	115	108	108	108	MPa
- at central support	103	103	100	100	100	MPa
- at central support, elevated temperature	92	92	90	90	90	MPa
Wrinkling strength (internal face):						
- in span	135	135	120	120	120	MPa
- at internal support	103	103	100	100	100	MPa
Resistance to repeated access load:	Not suitable for occasional foot traffic for access or maintenance					
Other properties:						
Thermal transmittance, U _{ds} :	0.18	0.15	0.14	0.12	0.11	W/m ² K
Thermal conductivity of the core, λ _{Declared} :	0.022					W/mK
Reaction to fire:	B-s1, d0					Class (EN 13501-1)
Fire resistance (wall, horizontal):	NPD					
Fire resistance (wall, vertical):	EI 30					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):	NPD					(EN 12114)
Water vapour permeability:	Impermeable					
Airborne sound insulation, R _w (C; C _{tr}):	25 (-2; -4)					dB (EN ISO 717-1)
Sound absorption, α _w :	0.10					(EN ISO 11654)
Durability:	Pass - all colours					

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