



DECLARATION OF PERFORMANCE No. 37/X-PIR/OBO

1. Unique identification code of product-type:

Sandwich panel SP2B X-PIR, SP2B X-PIR ENERGY, SP2E X-PIR, SP2E X-PIR ENERGY with polyisocyanurate core and stainless steel facings

SP2B40X-PIR	SP2E120X-PIR
SP2B60X-PIR	SP2E160X-PIR
SP2B80X-PIR	SP2E180X-PIR
SP2B100X-PIR	SP2E200X-PIR
SP2B80X-PIR ENERGY	SP2E120X-PIR ENERGY
SP2B100X-PIR ENERGY	SP2E160X-PIR ENERGY
	SP2E180X-PIR ENERGY
	SP2E200X-PIR ENERGY

2. Intended use: Self-supporting metal faced insulating panels for use in buildings; external walls, internal walls, roofs and ceilings
3. Manufacturer: Ruukki Polska Sp. z o.o.
Ul. Jaktorowska 13, 96-300 yradów, 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/Products-and-solutions/Certificates-EC--and-environmental-declarations>

Signed for and on behalf of the manufacturer by:


Adam Korol
Senior Vice President
Strategic Management



Helsinki, 01.02.2016

Attachment 1 to Declaration of Performance 37/X-PIR/OBO – SP2B X-PIR panels

Panel type	SP2B X-PIR					
Reference to harmonized standard:	EN 14509:2013					
Year when CE mark was affixed:	15					
Intended use:	Internal or external walls					
Panel thickness:	40	60	80	100	Reference	
Thickness of external facing:	0,50 - 0,70				mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190 1.4301, 1.4404					(EN 10346) (EN 10088-1)
Coating of external facing:	SP25, Hiarc, Hiarc max, Csafe, PVC INOX					(EN 10169) (EN 10088-1)
External facing profile:	L, M, R28, P, F					
Thickness of internal facing:	0,40 - 0,70				mm	(EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+Z100 1.4301, 1.4404					(EN 10346) (EN 10088-1)
Coating of internal facing:	SP25, Hiarc, Hiarc max, Csafe, PVC INOX					(EN 10169) (EN 10088-1)
Internal facing profile:	L, F					
Core material:	PIR					
Density of core material:	39				kg/m ³	
Mass:	9,5	10,3	11,2	12,1	kg/m ²	
Mechanical resistance:						
Tensile strength:	0,10	0,10	0,10	0,10	MPa	
Shear strength:	0,11	0,11	0,11	0,11	MPa	
Reduced long term shear strength:	0,044	0,044	0,044	0,044	MPa	
Shear modulus (core):	3,00	3,00	3,00	3,00	MPa	
Compressive strength (core):	0,11	0,11	0,11	0,11	MPa	
Creep coefficient t=2000h:	1,31	1,31	1,31	1,31		
Creep coefficient t=100000h:	1,68	1,68	1,68	1,68		
Wrinkling strength (external face):						
- in span	165(150)*	165(150)*	165(150)*	165(150)*	MPa	
- in span, elevated temperature	150(135)*	150(135)*	150(135)*	150(135)*	MPa	
- at central support	139(124)*	139(124)*	139(124)*	139(124)*	MPa	
- at central support, elevated temperature	125(111)*	125(111)*	125(111)*	125(111)*	MPa	
Wrinkling strength (internal face):						
- in span	160(125)*	160(125)*	160(125)*	160(125)*	MPa	
- at internal support	155(124)*	155(124)*	155(124)*	155(124)*	MPa	
Other properties:						
Thermal transmittance, U-value:	0,56	0,36	0,27	0,22	W/m ² K	
Thermal conductivity of the core, $\lambda_{\text{Declared}}$:	0,022				W/mK	
Reaction to fire:	B-s2, d0			B-s1, d0	Class	(EN 13501-1)
Fire resistance (wall):	NPD			EI 30		(EN 13501-2)
External fire performance:	Not applicable					
Water permeability:	A	A	A	A	Class	(EN 12865)
Air permeability:	≤ 1,5	≤ 1,5	≤ 1,5	≤ 1,5	m ³ /m ² h	(EN 12114)
Water vapour permeability:	Impermeable					
Airborne sound insulation, $R_w(C; C_{tr})$:	24 (-2; -4)	24 (-2; -4)	24 (-2; -4)	24 (-2; -4)	dB	(EN ISO 717-1)
Sound absorption, α_w :	0,10	0,10	0,10	0,10		(EN ISO 11654)
Durability:	Pass - all colours					

* values in brackets refer to facings in flat profiling only

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

Attachment 2 to Declaration of Performance 37/X-PIR/OBO – SP2B X-PIR ENERGY panels

Panel type	SP2B X-PIR ENERGY			
Reference to harmonized standard:	EN 14509:2013			
Year when CE mark was affixed:	15			
Intended use:	Internal or external walls			
Panel thickness:	80	100	Reference	
Thickness of external facing:	0,50 - 0,70		mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190 1.4301, 1.4404			(EN 10346) (EN 10088-1)
Coating of external facing:	SP25, Hiarc, Hiarc max, Csafe, PVC INOX			(EN 10169) (EN 10088-1)
External facing profile:	L, M, R28, P, F			
Thickness of internal facing:	0,40 - 0,70		mm	(EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+Z100 1.4301, 1.4404			(EN 10346) (EN 10088-1)
Coating of internal facing:	SP25, Hiarc, Hiarc max, Csafe, PVC INOX			(EN 10169) (EN 10088-1)
Internal facing profile:	L, F			
Core material:	PIR			
Density of core material:	39		kg/m ³	
Mass:	11,2	12,1	kg/m ²	
Mechanical resistance:				
Tensile strength:	0,10	0,10	MPa	
Shear strength:	0,11	0,11	MPa	
Reduced long term shear strength:	0,044	0,044	MPa	
Shear modulus (core):	3,00	3,00	MPa	
Compressive strength (core):	0,11	0,11	MPa	
Creep coefficient t=2000h:	1,31	1,31		
Creep coefficient t=100000h:	1,68	1,68		
Wrinkling strength (external face):				
- in span	165(150)*	165(150)*	MPa	
- in span, elevated temperature	150(135)*	150(135)*	MPa	
- at central support	139(124)*	139(124)*	MPa	
- at central support, elevated temperature	125(111)*	125(111)*	MPa	
Wrinkling strength (internal face):				
- in span	160(125)*	160(125)*	MPa	
- at internal support	155(124)*	155(124)*	MPa	
Other properties:				
Thermal transmittance, U-value:	0,27	0,22	W/m ² K	
Thermal conductivity of the core, $\lambda_{\text{Declared}}$:	0,022		W/mK	
Reaction to fire:	B-s2, d0	B-s1, d0	Class	(EN 13501-1)
Fire resistance (wall):	NPD	EI 30		(EN 13501-2)
External fire performance:	Not applicable			
Water permeability:	A	A	Class	(EN 12865)
Air permeability:	≤ 1,5	≤ 1,5	m ³ /m ² ·h	(EN 12114)
Water vapour permeability:	Impermeable			
Airborne sound insulation, $R_w(C; C_{tr})$:	24 (-2; -4)	24 (-2; -4)	dB	(EN ISO 717-1)
Sound absorption, α_w :	0,10	0,10		(EN ISO 11654)
Durability:	Pass - all colours			

* values in brackets refer to facings in flat profiling only

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Attachment 3 to Declaration of Performance 37/X-PIR/OBO – SP2E X-PIR panels

Panel type	SP2E X-PIR					
Reference to harmonized standard:	EN 14509:2013					
Year when CE mark was affixed:	15					
Intended use:	Internal or external walls					
Panel thickness:	120	160	180	200	Reference	
Thickness of external facing:	0,50 - 0,70				mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190 1.4301, 1.4404					(EN 10346) (EN 10088-1)
Coating of external facing:	SP25, Hiarc, Hiarc max, Csafe, PVC INOX					(EN 10169) (EN 10088-1)
External facing profile:	L, M, R28, P, F					
Thickness of internal facing:	0,50 - 0,70				mm	(EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+Z100 1.4301, 1.4404					(EN 10346) (EN 10088-1)
Coating of internal facing:	SP25, Hiarc, Hiarc max, Csafe, PVC INOX					(EN 10169) (EN 10088-1)
Internal facing profile:	L, F					
Core material:	PIR					
Density of core material:	39				kg/m ³	
Mass:	13,8	15,5	16,4	17,3	kg/m ²	
Mechanical resistance:						
Tensile strength:	0,1	0,1	0,1	0,1	MPa	
Shear strength:	0,11	0,1	0,095	0,09	MPa	
Reduced long term shear strength:	0,044	0,04	0,038	0,036	MPa	
Shear modulus (core):	3	2,65	2,47	2,3	MPa	
Compressive strength (core):	0,11	0,11	0,11	0,11	MPa	
Creep coefficient t=2000h:	1,87	1,87	1,87	1,87		
Creep coefficient t=100000h:	2,48	2,48	2,48	2,48		
Wrinkling strength (external face):						
- in span	180(150)*	180(150)*	180(150)*	180(145)*	MPa	
- in span, elevated temperature	162(130)*	162(130)*	162(130)*	162(130)*	MPa	
- at central support	133(118)*	133(118)*	129(114)*	126(111)*	MPa	
- at central support, elevated temperature	119(106)*	119(106)*	116(102)*	113(100)*	MPa	
Wrinkling strength (internal face):						
- in span	160(125)*	160(125)*	160(125)*	160(125)*	MPa	
- at internal support	115(113)*	115(113)*	112(108)*	109(102)*	MPa	
Other properties:						
Thermal transmittance, U-value:	0,18	0,14	0,12	0,11	W/m ² K	
Thermal conductivity of the core, $\lambda_{\text{Declared}}$:	0,022				W/mK	
Reaction to fire:	B-s1, d0				Class	(EN 13501-1)
Fire resistance (wall):	EI 15 / EI 20					(EN 13501-2)
External fire performance:	Not applicable					
Water permeability:	A	A	A	A	Class	(EN 12865)
Air permeability:	≤ 1,5	≤ 1,5	≤ 1,5	≤ 1,5	m ³ /m ² ·h	(EN 12114)
Water vapour permeability:	Impermeable					
Airborne sound insulation, $R_w(C; C_{tr})$:	25 (-2; -4)	25 (-2; -4)	25 (-2; -4)	25 (-2; -4)	dB	(EN ISO 717-1)
Sound absorption, α_w :	0,10	0,10	0,10	0,10		(EN ISO 11654)
Durability:	Pass - all colours					

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Attachment 4 to Declaration of Performance 37/X-PIR/OBO – SP2E X-PIR ENERGY panels

Panel type	SP2E X-PIR ENERGY					
Reference to harmonized standard:	EN 14509:2013					
Year when CE mark was affixed:	15					
Intended use:	Internal or external walls					
Panel thickness:	120	160	180	200	Reference	
Thickness of external facing:	0,50 - 0,70				mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190 1.4301, 1.4404					(EN 10346) (EN 10088-1)
Coating of external facing:	SP25, Hiarc, Hiarc max, Csafe, PVC INOX					(EN 10169) (EN 10088-1)
External facing profile:	L, M, R28, P, F					
Thickness of internal facing:	0,50 - 0,70				mm	(EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+Z100 1.4301, 1.4404					(EN 10346) (EN 10088-1)
Coating of internal facing:	SP25, Hiarc, Hiarc max, Csafe, PVC INOX					(EN 10169) (EN 10088-1)
Internal facing profile:	L, F					
Core material:	PIR					
Density of core material:	39				kg/m ³	
Mass:	13,8	15,5	16,4	17,3	kg/m ²	
Mechanical resistance:						
Tensile strength:	0,1	0,1	0,1	0,1	MPa	
Shear strength:	0,11	0,1	0,095	0,09	MPa	
Reduced long term shear strength:	0,044	0,04	0,038	0,036	MPa	
Shear modulus (core):	3	2,65	2,47	2,3	MPa	
Compressive strength (core):	0,11	0,11	0,11	0,11	MPa	
Creep coefficient t=2000h:	1,87	1,87	1,87	1,87		
Creep coefficient t=100000h:	2,48	2,48	2,48	2,48		
Wrinkling strength (external face):						
- in span	180(150)*	180(150)*	180(150)*	180(145)*	MPa	
- in span, elevated temperature	162(130)*	162(130)*	162(130)*	162(130)*	MPa	
- at central support	133(118)*	133(118)*	129(114)*	126(111)*	MPa	
- at central support, elevated temperature	119(106)*	119(106)*	116(102)*	113(100)*	MPa	
Wrinkling strength (internal face):						
- in span	160(125)*	160(125)*	160(125)*	160(125)*	MPa	
- at internal support	115(113)*	115(113)*	112(108)*	109(102)*	MPa	
Other properties:						
Thermal transmittance, U-value:	0,18	0,14	0,12	0,11	W/m ² K	
Thermal conductivity of the core, $\lambda_{\text{Declared}}$:	0,022				W/mK	
Reaction to fire:	B-s1, d0				Class	(EN 13501-1)
Fire resistance (wall):	EI 15 / EI 20					(EN 13501-2)
External fire performance:	Not applicable					
Water permeability:	A	A	A	A	Class	(EN 12865)
Air permeability:	≤ 1,5	≤ 1,5	≤ 1,5	≤ 1,5	m ³ /m ² h	(EN 12114)
Water vapour permeability:	Impermeable					
Airborne sound insulation, $R_w(C; C_{tr})$:	25 (-2; -4)	25 (-2; -4)	25 (-2; -4)	25 (-2; -4)	dB	(EN ISO 717-1)
Sound absorption, α_w :	0,10	0,10	0,10	0,10		(EN ISO 11654)
Durability:	Pass - all colours					

* values in brackets refer to facings in flat profiling only

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