



DECLARATION OF PERFORMANCE

No. 54/MW/OBO

1. Unique identification code of product type:

Sandwich panel SPB W, SPB WB, SPB W ENERGY, SPB WB ENERGY, SP2D W, SPC W with mineral wool core

SPB80W	SPB80WB	SPB80W ENERGY	SPB80WB ENERGY
SPB100W	SPB100WB	SPB100W ENERGY	SPB100WB ENERGY
SPB120W	SPB120WB	SPB120W ENERGY	SPB120WB ENERGY
SPB140W	SPB140WB	SPB140W ENERGY	SPB140WB ENERGY
SPB150W	SPB150WB	SPB150W ENERGY	SPB150WB ENERGY
SPB160W	SPB160WB	SPB160W ENERGY	SPB160WB ENERGY
SPB170W	SPB170WB	SPB170W ENERGY	SPB170WB ENERGY
SPB180W	SPB180WB	SPB180W ENERGY	SPB180WB ENERGY
SPB200W	SPB200WB	SPB200W ENERGY	SPB200WB ENERGY
SPB210W	SPB210WB	SPB210W ENERGY	SPB210WB ENERGY
SPB230W	SPB230WB	SPB230W ENERGY	SPB230WB ENERGY
SP2D100W	SPC140/100W		
SP2D120W	SPC190/150W		
SP2D140W			
SP2D150W			
SP2D160W			
SP2D170W			
SP2D180W			
SP2D200W			
SP2D230W			

Sandwich panel SPB WF, SPB WFB, SPB WF ENERGY, SPB WFB ENERGY with mineral wool core

SPB120WF	SPB120WFB	SPB120WF ENERGY	SPB120WFB ENERGY
SPB140WF	SPB140WFB	SPB140WF ENERGY	SPB140WFB ENERGY
SPB150WF	SPB150WFB	SPB150WF ENERGY	SPB150WFB ENERGY
SPB160WF	SPB160WFB	SPB160WF ENERGY	SPB160WFB ENERGY
SPB170WF	SPB170WFB	SPB170WF ENERGY	SPB170WFB ENERGY
SPB180WF	SPB180WFB	SPB180WF ENERGY	SPB180WFB ENERGY
SPB200WF	SPB200WFB	SPB200WF ENERGY	SPB200WFB ENERGY
SPB210WF	SPB210WFB	SPB210WF ENERGY	SPB210WFB ENERGY
SPB230WF	SPB230WFB	SPB230WF ENERGY	SPB230WFB ENERGY

Sandwich panel SPB WS, SPB WSB, SPB WS ENERGY, SPB WSB ENERGY with mineral wool core

SPB100WS	SPB100WSB	SPB100WS ENERGY	SPB100WSB ENERGY
SPB120WS	SPB120WSB	SPB120WS ENERGY	SPB120WSB ENERGY
SPB140WS	SPB140WSB	SPB140WS ENERGY	SPB140WSB ENERGY
SPB150WS	SPB150WSB	SPB150WS ENERGY	SPB150WSB ENERGY
SPB160WS	SPB160WSB	SPB160WS ENERGY	SPB160WSB ENERGY
SPB170WS	SPB170WSB	SPB170WS ENERGY	SPB170WSB ENERGY
SPB180WS	SPB180WSB	SPB180WS ENERGY	SPB180WSB ENERGY
SPB200WS	SPB200WSB	SPB200WS ENERGY	SPB200WSB ENERGY
SPB210WS	SPB210WSB	SPB210WS ENERGY	SPB210WSB ENERGY
SPB230WS	SPB230WSB	SPB230WS ENERGY	SPB230WSB ENERGY

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

<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:



Adam Korol
Senior Vice President
Building Envelopes

Helsinki, 17.01.2022

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

ENERGY PANELS:

SPB W Energy / SPB WB Energy	Page 4
SPB WF Energy / SPB WFB Energy	Page 5
SPB WS Energy / SPB WSB Energy	Page 6

OTHER PANELS:

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SPB WS / SPB WSB	Page 9
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SPC W	Page 11

Attachment 1 to Declaration of Performance 54/MW/OBO

Panel type:	SPB W ENERGY, SPB WB ENERGY												
Reference to harmonized standard:	EN 14509:2013												
Intended use:	Internal or external walls, ceilings												
Panel name:	SPB80W ENERGY SPB80WB ENERGY	SPB100W ENERGY SPB100WB ENERGY	SPB120W ENERGY SPB120WB ENERGY	SPB140W ENERGY SPB140WB ENERGY	SPB150W ENERGY SPB150WB ENERGY	SPB160W ENERGY SPB160WB ENERGY	SPB170W ENERGY SPB170WB ENERGY	SPB180W ENERGY SPB180WB ENERGY	SPB200W ENERGY SPB200WB ENERGY	SPB210W ENERGY SPB210WB ENERGY	SPB230W ENERGY SPB230WB ENERGY	Reference	
Year when CE mark was affixed:	15									21	15		
Thickness of external facing:	0,50 - 0,70											mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZM140, S280GD+ZM120 S280GD+ZA255											(EN 10346)	
Coating of external facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²											(EN 10169)	
External facing profile (module 1100 mm):	L, M, R275, R550, F												
External facing profile (module 1000 mm):	L, M, R28, R250, R500, F												
Thickness of internal facing:	0,50 - 0,70									mm	(EN 10143)		
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095											(EN 10346)	
Coating of internal facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²											(EN 10169)	
Internal facing profile:	L25, L, F												
Core material:	MW												
Density of core material:	115									kg/m ³			
Nominal panel thickness:	80	100	120	140	150	160	170	180	200	208	230	mm	
Mass (module 1100 mm):	19.6	21.9	24.2	26.5	27.7	28.8	30.0	31.1	33.4	34.4	36.9	kg/m ²	
Mass (module 1000 mm):	19.7	22.0	24.3	26.6	27.7	28.9	30.0	31.2	33.5	34.4	36.9	kg/m ²	
Mechanical resistance:													
Tensile strength:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	MPa	
Shear strength:	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.058	0.058	MPa	
Reduced long term shear strength:	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.029	0.029	MPa	
Shear modulus (core):	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	MPa	
Compressive strength (core):	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	MPa	
Creep coefficient t=2000h:	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37		
Creep coefficient t=100000h:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45		
Wrinkling strength (external face):													
- in span	128	128	128	128	128	128	128	128	128	120	120	MPa	
- in span, elevated temperature	124	124	124	124	124	124	124	124	124	115	115	MPa	
- at central support	95	95	95	95	95	95	95	95	95	90	90	MPa	
- at central support, elevated temperature	83	83	83	83	83	83	83	83	83	78	78	MPa	
Wrinkling strength (internal face):													
- in span	128	128	128	128	128	128	128	128	128	120	120	MPa	
- at internal support	110	110	110	110	110	110	110	110	110	105	105	MPa	
Other properties:													
Thermal transmittance, U _{g,s} :	0.51	0.41	0.34	0.30	0.28	0.26	0.25	0.23	0.21	0.20	0.18	W/m ² K	
Thermal conductivity of the core, λ _{Declared} :	0.043											W/mK	
Reaction to fire:	A2-s1, d0											Class	(EN 13501-1)
Fire resistance (wall, horizontal):	EI 30	EI 60		EI 90	EI 180						Class	(EN 13501-2)	
Fire resistance (wall, vertical):	NPD	EI 60		EI 90	EI 180						Class	(EN 13501-2)	
Fire resistance (ceiling):	NPD												
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 _v):	33 (-1; -4)	32 (-2; -4)										dB	(EN ISO 717-1)
Sound absorption, α _w :	0.1												(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 54/MW/OBO

Panel type:	SPB WF ENERGY, SPB WFB ENERGY									
Reference to harmonized standard:	EN 14509:2013									
Intended use:	Internal or external walls, ceilings									
Panel name:	SPB120WF ENERGY SPB120WFB ENERGY	SPB140WF ENERGY SPB140WFB ENERGY	SPB150WF ENERGY SPB150WFB ENERGY	SPB160WF ENERGY SPB160WFB ENERGY	SPB170WF ENERGY SPB170WFB ENERGY	SPB180WF ENERGY SPB180WFB ENERGY	SPB200WF ENERGY SPB200WFB ENERGY	SPB210WF ENERGY SPB210WFB ENERGY	SPB230WF ENERGY SPB230WFB ENERGY	Reference
Year when CE mark was affixed:	17							22	17	
Thickness of external facing:	0,50 - 0,70									mm (EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZM140, S280GD+ZM120 S280GD+ZA255									(EN 10346)
Coating of external facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²									(EN 10169)
External facing profile (module 1100 mm):	L, M, R275, R550, F									
External facing profile (module 1000 mm):	L, M, R28, R250, R500, F									
Thickness of internal facing:	0,50 - 0,70									mm (EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095									(EN 10346)
Coating of internal facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²									(EN 10169)
Internal facing profile:	L25, L, F									
Core material:	MW									
Density of core material:	120					115				kg/m ³
Nominal panel thickness:	120	140	150	160	170	180	200	210	230	mm
Mass (module 1100 mm):	24.8	27.2	28.4	29.6	30.8	31.1	33.4	34.6	36.9	kg/m ²
Mass (module 1000 mm):	24.9	27.3	28.5	29.7	30.9	31.2	33.5	34.6	36.9	kg/m ²
Mechanical resistance:										
Tensile strength:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	MPa
Shear strength:	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.058	0.058	MPa
Reduced long term shear strength:	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.029	0.029	MPa
Shear modulus (core):	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	MPa
Compressive strength (core):	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	MPa
Creep coefficient t=2000h:	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	
Creep coefficient t=10000h:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
Wrinkling strength (external face):										
- in span	128	128	128	128	128	128	128	120	120	MPa
- in span, elevated temperature	124	124	124	124	124	124	124	115	115	MPa
- at central support	95	95	95	95	95	95	95	90	90	MPa
- at central support, elevated temperature	83	83	83	83	83	83	83	78	78	MPa
Wrinkling strength (internal face):										
- in span	128	128	128	128	128	128	128	120	120	MPa
- at internal support	110	110	110	110	110	110	110	105	105	MPa
Other properties:										
Thermal transmittance, U _{ds} :	0.36	0.31	0.29	0.27	0.26	0.23	0.21	0.20	0.18	W/m ² K
Thermal conductivity of the core, λ _D declared:	0.045					0.043				W/mK
Reaction to fire:						A2-s1, d0				Class (EN 13501-1)
Fire resistance (wall, horizontal):	EI 120		EI 180		EI 240					Class (EN 13501-2)
Fire resistance (wall, vertical):	EI 120		EI 180							Class (EN 13501-2)
Fire resistance (ceiling):	EI 120									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}):	32 (-1; -4)									dB (EN ISO 717-1)
Sound absorption, α _w :	0.1									(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 54/MW/OBO

Panel type:	SPB WS ENERGY, SPB WSB ENERGY											
Reference to harmonized standard:	EN 14509:2013											
Intended use:	Internal or external walls, ceilings											
Panel name:	SPB100WS ENERGY SPB100WSB ENERGY	SPB120WS ENERGY SPB120WSB ENERGY	SPB140WS ENERGY SPB140WSB ENERGY	SPB150WS ENERGY SPB150WSB ENERGY	SPB160WS ENERGY SPB160WSB ENERGY	SPB170WS ENERGY SPB170WSB ENERGY	SPB180WS ENERGY SPB180WSB ENERGY	SPB200WS ENERGY SPB200WSB ENERGY	SPB210WS ENERGY SPB210WSB ENERGY	SPB230WS ENERGY SPB230WSB ENERGY	Reference	
Year when CE mark was affixed:	16								22	16		
Thickness of external facing:	0,60 - 0,70										mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZM140, S280GD+ZM120 S280GD+ZA255											(EN 10346)
Coating of external facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²											(EN 10169)
External facing profile (module 1100 mm):	L, M, R275, R550, F											
External facing profile (module 1000 mm):	L, M, R28, R250, R500, F											
Thickness of internal facing:	0,50 - 0,70										mm	(EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095											(EN 10346)
Coating of internal facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²											(EN 10169)
Internal facing profile:	L25, L, F											
Core material:	MW											
Density of core material:	120										kg/m ³	
Nominal panel thickness:	100	120	140	150	160	170	180	200	210	230	mm	
Mass (module 1100 mm):	22.4	24.8	27.2	28.4	29.6	30.8	32.0	34.4	35.6	38.0	kg/m ²	
Mass (module 1000 mm):	22.5	24.9	27.3	28.5	29.7	30.9	32.1	34.5	35.7	38.1	kg/m ²	
Mechanical resistance:												
Tensile strength:	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	MPa	
Shear strength:	0.100	0.100	0.090	0.086	0.083	0.081	0.079	0.076	0.071	0.071	MPa	
Reduced long term shear strength:	0.040	0.040	0.036	0.034	0.033	0.032	0.032	0.030	0.028	0.028	MPa	
Shear modulus (core):	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	MPa	
Compressive strength (core):	0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	MPa	
Creep coefficient t=2000h:	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37		
Creep coefficient t=100000h:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45		
Wrinkling strength (external face):												
- in span	165	165	165	165	165	165	165	165	165	165	MPa	
- in span, elevated temperature	150	150	150	150	150	150	150	150	150	150	MPa	
- at central support	109	105	101	99	97	94	91	85	77	77	MPa	
- at central support, elevated temperature	98	94	91	89	87	84	82	77	69	69	MPa	
Wrinkling strength (internal face):												
- in span	165	165	165	165	165	165	165	165	165	165	MPa	
- at internal support	134	130	125	123	121	115	110	99	83	83	MPa	
Other properties:												
Thermal transmittance, U _{d,s} :	0.43	0.36	0.31	0.29	0.27	0.26	0.24	0.22	0.21	0.19	W/m ² K	
Thermal conductivity of the core, λ _{Declared} :	0.045										W/mK	
Reaction to fire:	A2-s1, d0										Class	(EN 13501-1)
Fire resistance (wall, horizontal):	EI 60		EI 90	EI 180							Class	(EN 13501-2)
Fire resistance (wall, vertical):	EI 60		EI 90	EI 180							Class	(EN 13501-2)
Fire resistance (ceiling):	NPD											
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}):	32 (-2; -4)										dB	(EN ISO 717-1)
Sound absorption, α _w :	0.1											(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 54/MW/OBO

Panel type:	SPB W, SPB WB												
Reference to harmonized standard:	EN 14509:2013												
Intended use:	Internal or external walls, ceilings												
Panel name:	SPB80W SPB80WB	SPB100W SPB100WB	SPB120W SPB120WB	SPB140W SPB140WB	SPB150W SPB150WB	SPB160W SPB160WB	SPB170W SPB170WB	SPB180W SPB180WB	SPB200W SPB200WB	SPB210W SPB210WB	SPB230W SPB230WB	Reference	
Year when CE mark was affixed:	15									21	15		
Thickness of external facing:	0,50 - 0,70											mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZM140, S280GD+ZM120 S280GD+ZA255												(EN 10346)
Coating of external facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²												(EN 10169)
External facing profile (module 1100 mm):	L, M, R275, R550, F												
External facing profile (module 1000 mm):	L, M, R28, R250, R500, F												
Thickness of internal facing:	0,50 - 0,70											mm	(EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095												(EN 10346)
Coating of internal facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²												(EN 10169)
Internal facing profile:	L25, L, F												
Core material:	MW												
Density of core material:	115											kg/m ³	
Nominal panel thickness:	80	100	120	140	150	160	170	180	203	208	230	mm	
Mass (module 1100 mm):	19.6	21.9	24.2	26.5	27.7	28.8	30.0	31.1	33.4	34.4	36.9	kg/m ²	
Mass (module 1000 mm):	19.7	22.0	24.3	26.6	27.7	28.9	30.0	31.2	33.5	34.4	36.9	kg/m ²	
Mechanical resistance:													
Tensile strength:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	MPa	
Shear strength:	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.058	0.058	MPa	
Reduced long term shear strength:	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.029	0.029	MPa	
Shear modulus (core):	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	MPa	
Compressive strength (core):	0.10	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	MPa	
Creep coefficient t=2000h:	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37		
Creep coefficient t=100000h:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45		
Wrinkling strength (external face):													
- in span	128	128	128	128	128	128	128	128	128	120	120	MPa	
- in span, elevated temperature	124	124	124	124	124	124	124	124	124	115	115	MPa	
- at central support	95	95	95	95	95	95	95	95	95	90	90	MPa	
- at central support, elevated temperature	83	83	83	83	83	83	83	83	83	78	78	MPa	
Wrinkling strength (internal face):													
- in span	128	128	128	128	128	128	128	128	128	120	120	MPa	
- at internal support	110	110	110	110	110	110	110	110	110	105	105	MPa	
Other properties:													
Thermal transmittance, U _{g,s} :	0.51	0.41	0.34	0.30	0.28	0.26	0.25	0.23	0.21	0.20	0.18	W/m ² K	
Thermal conductivity of the core, λ _{Declared} :	0.043											W/mK	
Reaction to fire:	A2-s1, d0											Class	(EN 13501-1)
Fire resistance (wall, horizontal):	EI 30	EI 60		EI 90	EI 180						Class	(EN 13501-2)	
Fire resistance (wall, vertical):	NPD	EI 60		EI 90	EI 180						Class	(EN 13501-2)	
Fire resistance (ceiling):	NPD												
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 _e):	33 (-1; -4)	32 (-2; -4)									dB	(EN ISO 717-1)	
Sound absorption, α _w :	0.1												(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 54/MW/OBO

Panel type:	SPB WF, SPB WFB												
Reference to harmonized standard:	EN 14509:2013												
Intended use:	Internal or external walls, ceilings												
Panel name:	SPB120WF SPB120WFB	SPB140WF SPB140WFB	SPB150WF SPB150WFB	SPB160WF SPB160WFB	SPB170WF SPB170WFB	SPB180WF SPB180WFB	SPB200WF SPB200WFB	SPB210WF SPB210WFB	SPB230WF SPB230WFB	Reference			
Year when CE mark was affixed:	17							22	17				
Thickness of external facing:	0,50 - 0,70									mm	(EN 10143)		
External facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZM140, S280GD+ZM120 S280GD+ZA255										(EN 10346)		
Coating of external facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²										(EN 10169)		
External facing profile (module 1100 mm):	L, M, R275, R550, F												
External facing profile (module 1000 mm):	L, M, R28, R250, R500, F												
Thickness of internal facing:	0,50 - 0,70									mm	(EN 10143)		
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095										(EN 10346)		
Coating of internal facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²										(EN 10169)		
Internal facing profile:	L25, L, F												
Core material:	MW												
Density of core material:	120					115				kg/m ³			
Nominal panel thickness:	120	140	150	160	170	180	200	210	230	mm			
Mass (module 1100 mm):	24.8	27.2	28.4	29.6	30.8	31.1	33.4	34.6	36.9	kg/m ²			
Mass (module 1000 mm):	24.9	27.3	28.5	29.7	30.9	31.2	33.5	34.6	36.9	kg/m ²			
Mechanical resistance:													
Tensile strength:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	MPa			
Shear strength:	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.058	0.058	MPa			
Reduced long term shear strength:	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.029	0.029	MPa			
Shear modulus (core):	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	MPa			
Compressive strength (core):	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	0.09	MPa			
Creep coefficient t=2000h:	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37				
Creep coefficient t=100000h:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45				
Wrinkling strength (external face):													
- in span	128	128	128	128	128	128	128	120	120	MPa			
- in span, elevated temperature	124	124	124	124	124	124	124	115	115	MPa			
- at central support	95	95	95	95	95	95	95	90	90	MPa			
- at central support, elevated temperature	83	83	83	83	83	83	83	78	78	MPa			
Wrinkling strength (internal face):													
- in span	128	128	128	128	128	128	128	120	120	MPa			
- at internal support	110	110	110	110	110	110	110	105	105	MPa			
Other properties:													
Thermal transmittance, U _{A,s} :	0.36	0.31	0.29	0.27	0.26	0.23	0.21	0.20	0.18	W/m ² K			
Thermal conductivity of the core, λ _{Declared} :	0.045					0.043				W/mK			
Reaction to fire:	A2-s1, d0									Class	(EN 13501-1)		
Fire resistance (wall, horizontal):	EI 120		EI 180		EI 240						Class	(EN 13501-2)	
Fire resistance (wall, vertical):	EI 120		EI 180									Class	(EN 13501-2)
Fire resistance (ceiling):	EI 120											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 ₂):	32 (-1; -4)									dB		(EN ISO 717-1)	
Sound absorption, α _w :	0.1											(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 54/MW/OBO

Panel type:	SPB WS, SPB WSB											
Reference to harmonized standard:	EN 14509:2013											
Intended use:	Internal or external walls, ceilings											
Panel name:	SPB100WS SPB100WSB	SPB120WS SPB120WSB	SPB140WS SPB140WSB	SPB150WS SPB150WSB	SPB160WS SPB160WSB	SPB170WS SPB170WSB	SPB180WS SPB180WSB	SPB200WS SPB200WSB	SPB210WS SPB210WSB	SPB230WS SPB230WSB	Reference	
Year when CE mark was affixed:	16								22	16		
Thickness of external facing:	0,60 - 0,70										mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZM140, S280GD+ZM120 S280GD+ZA255											(EN 10346)
Coating of external facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²											(EN 10169)
External facing profile (module 1100 mm):	L, M, R275, R550, F											
External facing profile (module 1000 mm):	L, M, R28, R250, R500, F											
Thickness of internal facing:	0,50 - 0,70										mm	(EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095											(EN 10346)
Coating of internal facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²											(EN 10169)
Internal facing profile:	L25, L, F											
Core material:	MW											
Density of core material:	120										kg/m ³	
Nominal panel thickness:	100	120	140	150	160	170	180	200	210	230	mm	
Mass (module 1100 mm):	22.4	24.8	27.2	28.4	29.6	30.8	32.0	34.4	35.6	38.0	kg/m ²	
Mass (module 1000 mm):	22.5	24.9	27.3	28.5	29.7	30.9	32.1	34.5	35.7	38.1	kg/m ²	
Mechanical resistance:												
Tensile strength:	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	MPa	
Shear strength:	0.100	0.100	0.090	0.086	0.083	0.081	0.079	0.076	0.071	0.071	MPa	
Reduced long term shear strength:	0.040	0.040	0.036	0.034	0.033	0.032	0.032	0.030	0.028	0.028	MPa	
Shear modulus (core):	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	MPa	
Compressive strength (core):	0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	0.115	MPa	
Creep coefficient t=2000h:	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37		
Creep coefficient t=10000h:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45		
Wrinkling strength (external face):												
- in span	165	165	165	165	165	165	165	165	165	165	MPa	
- in span, elevated temperature	150	150	150	150	150	150	150	150	150	150	MPa	
- at central support	109	105	101	99	97	94	91	85	77	77	MPa	
- at central support, elevated temperature	98	94	91	89	87	84	82	77	69	69	MPa	
Wrinkling strength (internal face):												
- in span	165	165	165	165	165	165	165	165	165	165	MPa	
- at internal support	134	130	125	123	121	115	110	99	83	83	MPa	
Other properties:												
Thermal transmittance, U _{g,s} :	0.43	0.36	0.31	0.29	0.27	0.26	0.24	0.22	0.21	0.19	W/m ² K	
Thermal conductivity of the core, λ _{Declared} :	0.045										W/mK	
Reaction to fire:	A2-s1, d0										Class	(EN 13501-1)
Fire resistance (wall, horizontal):	EI 60		EI 90	EI 180						Class	(EN 13501-2)	
Fire resistance (wall, vertical):	EI 60		EI 90	EI 180						Class	(EN 13501-2)	
Fire resistance (ceiling):	NPD											
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}):	32 (-2; -4)										dB	(EN ISO 717-1)
Sound absorption, α _w :	0.1											(EN ISO 11654)
Durability:	Pass - all colours											

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

Attachment 7 to Declaration of Performance 54/MW/OBO

Panel type:	SP2D W										
Reference to harmonized standard:	EN 14509:2013										
Intended use:	Internal or external walls										
Panel name:	SP2D100W	SP2D120W	SP2D140W	SP2D150W	SP2D160W	SP2D170W	SP2D180W	SP2D200W	SP2D230W	Reference	
Year when CE mark was affixed:	15										
Thickness of external facing:	0,50 - 0,70									mm (EN 10143)	
External facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZM140, S280GD+ZM120 S280GD+ZA255									(EN 10346)	
Coating of external facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²									(EN 10169)	
External facing profile:	L, M, R250, R500, F										
Thickness of internal facing:	0,50 - 0,70									mm (EN 10143)	
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZA255, S280GD+Z100, S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095									(EN 10346)	
Coating of internal facing:	Polyester, Hiarc, Hiarc max, PVC, Csafe or other colour coating with PCS ≤ 4,0 MJ/m ²									(EN 10169)	
Internal facing profile:	L, F										
Core material:	MW										
Density of core material:	115									kg/m ³	
Nominal panel thickness:	100	120	140	150	160	170	180	200	230	mm	
Mass:	22.5	24.8	27.1	28.2	29.4	30.5	31.7	34.0	37.4	kg/m ²	
Mechanical resistance:											
Tensile strength:	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	MPa	
Shear strength:	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.058	MPa	
Reduced long term shear strength:	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.029	MPa	
Shear modulus (core):	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	MPa	
Compressive strength (core):	0.10	0.10	0.10	0.09	0.09	0.09	0.09	0.09	0.09	MPa	
Creep coefficient t=2000h:	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37		
Creep coefficient t=100000h:	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45		
Wrinkling strength (external face):											
- in span	128	128	128	128	128	128	128	128	120	MPa	
- in span, elevated temperature	124	124	124	124	124	124	124	124	115	MPa	
- at central support	95	95	95	95	95	95	95	95	90	MPa	
- at central support, elevated temperature	83	83	83	83	83	83	83	83	78	MPa	
Wrinkling strength (internal face):											
- in span	128	128	128	128	128	128	128	128	120	MPa	
- at internal support	110	110	110	110	110	110	110	110	105	MPa	
Other properties:											
Thermal transmittance, U _{A,s} :	0.41	0.35	0.30	0.29	0.26	0.25	0.24	0.21	0.19	W/m ² K	
Thermal conductivity of the core, λ _{Declared} :	0.043									W/mK	
Reaction to fire:	A2-s1, d0									Class (EN 13501-1)	
Fire resistance (wall, horizontal):	NPD					EI 60 (i→o) EI 120 (o→i)	EI 60 (i→o) EI 180 (o→i)			Class (EN 13501-2)	
Fire resistance (wall, vertical):	EI 60 (i→o) EI 60 (o→i)	EI 60 (i→o) EI 90 (o→i)			EI 90 (i→o) EI 120 (o→i)	EI 120 (i→o) EI 120 (o→i)	EI 120 (i→o) EI 180 (o→i)	EI 120 (i→o) EI 240 (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}):	32 (-2; -4)									dB (EN ISO 717-1)	
Sound absorption, α _w :	0.1									(EN ISO 11654)	
Durability:	Pass - all colours										

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

Attachment 8 to Declaration of Performance 54/MW/OBO

Panel type:	SPC W			
Reference to harmonized standard:	EN 14509:2013			
Intended use:	Roof panel			
Panel name:	SPC140/100W	SPC190/150W	Reference	
Year when CE mark was affixed:	15			
Thickness of external facing:	0,50 - 0,70		mm	(EN 10143)
External facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZM140, S280GD+ZM120 S280GD+ZA255			(EN 10346)
Coating of external facing:	Polyester, Hiarc, Hiarc max, Csafe or other colour coating with PCS ≤ 4,0 MJ/m²			(EN 10169)
External facing profile:	T			
Thickness of internal facing:	0,50 - 0,70		mm	(EN 10143)
Internal facing - steel grade:	S280GD+Z275, S280GD+Z190, S280GD+ZA255, S280GD+Z100 S280GD+ZM140, S280GD+ZM120, S280GD+ZM100, S280GD+ZA095			(EN 10346)
Coating of internal facing:	Polyester, Hiarc, Hiarc max, Csafe or other colour coating with PCS ≤ 4,0 MJ/m²			(EN 10169)
Internal facing profile:	L			
Core material:	MW			
Density of core material:	115		kg/m³	
Nominal panel thickness:	100	150	mm	
Mass:	22.8	28.5	kg/m²	
Mechanical resistance:				
Tensile strength:	0.07	0.07	MPa	
Shear strength:	0.043	0.043	MPa	
Reduced long term shear strength:	0.022	0.022	MPa	
Shear modulus (core):	1.84	1.51	MPa	
Compressive strength (core):	0.10	0.10	MPa	
Creep coefficient t=2000h:	0.40	0.40		
Creep coefficient t=100000h:	0.62	0.62		
Wrinkling strength (external face):				
- in span	170	170	MPa	
- in span, elevated temperature	170	170	MPa	
- at central support	170	170	MPa	
- at central support, elevated temperature	170	170	MPa	
Wrinkling strength (internal face):				
- in span	110	110	MPa	
- at internal support	105	105	MPa	
Other properties:				
Thermal transmittance, U _{d,s} :	0.40	0.27	W/m²K	
Thermal conductivity of the core, λ _{Declared} :	0.043		W/mK	
Reaction to fire:	A2-s1, d0		Class	(EN 13501-1)
Fire resistance:	REI 60 / RE 180		Class	(EN 13501-2)
External fire performance:	Broof		Class	(EN 13501-5)
Water permeability:	A		Class	(EN 12865)
Air permeability:	NPD			
Water vapour permeability:	Impermeable			
Airborne sound insulation, R _w (C; C _{tr}):	34 (-1; -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.