

DECLARATION OF PERFORMANCE

No 08.05/W PIR-F

1. Unique identification code of the product –type:

IzoWall PIR-F

2. Intended use or uses

External and internal wall elements

3. Manufacturer

IZOPANEL Sp. z o.o.

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5. System(s) for assessment and verification of constancy of performance:

3

6a. Harmonised standard

EN 14509:2013 "Self-supporting double skin metal faced insulating panels. Factory made products. Specifications"

Notified body or bodies

- **Building Research Institute – Notified Body No. 1488**
- **Fires s.r.o. – Notified Body No. 1396**

7. Declared performance:

General characteristics	Performance				
Tensile strength; f_{ct} [MPa]					
40-120	0,08				
140-220	0,07				
Compressive strength; f_{cc} [MPa]					
40-120	0,1				
140-220	0,09				
Shear strength; f_{cv} [MPa]					
40-120	0,1				
140-220	0,07				
Creep coefficient; $\varphi_{t=2000h}$	1,57				
Creep coefficient; $\varphi_{t=100000h}$	2,44				
Long-term shear strength; f_{cvt} [MPa]					
40-120	0,04				
140-220	0,028				
Shear modulus; G_c [MPa]					
40-120	2,5				
140-220	2,1				
Critical stress 40-120 [MPa]:	L(line)	R(groove)	M(micro)	E(smooth)	
Ext.side –span-ambient temp.	128	108	93	52	
Ext.side-span – increased temp.	120	101	87	48	
Ext.side-support-ambient temp.	100	84	73	40	
Ext.side – suport-increased temp.	92	78	67	37	
Int.side –span –ambient temp.	119	100	85	41	
Int.side-span-increased temp.	112	94	80	39	
Int.side-support- ambient temp.	85	71	61	29	
Int.side-support-ambient temp.	78	65	56	27	
Bending moment 40-120 [kNm/m]:					
Panel thickness [mm]	40	60	80	100	120
Line, moment in span, ext. cladding - normal temp.	2,28	3,43	4,58	5,73	6,89
Line, moment in span, ext. cladding - increased temp.	2,14	3,22	4,30	5,38	6,46
Line, moment in span, int. cladding - normal temp.	1,69	2,55	3,41	4,26	5,12
Line, moment in span, int. cladding - increased temp.	1,59	2,40	3,21	4,01	4,82

General characteristics	Performance				
<i>Line, moment on support, ext. cladding - normal temp.</i>	1,78	2,68	3,58	4,48	5,38
<i>Line, moment on support, ext. cladding - increased temp.</i>	1,64	2,47	3,29	4,12	4,95
<i>Line, moment on support, int. cladding - normal temp.</i>	1,40	2,10	2,81	3,51	4,22
<i>Line, moment on support, int. cladding - increased temp.</i>	1,32	1,99	2,66	3,33	4,00
<i>Groove, moment in span, ext. cladding - normal temp.</i>	1,92	2,89	3,87	4,84	5,81
<i>Groove, moment in span, ext. cladding - increased temp.</i>	1,80	2,71	3,62	4,52	5,43
<i>Groove, moment in span, int. cladding - normal temp.</i>	1,42	2,14	2,86	3,58	4,30
<i>Groove, moment in span, int. cladding - increased temp.</i>	1,34	2,02	2,69	3,37	4,05
<i>Groove, moment on support, ext. cladding - normal temp.</i>	1,49	2,25	3,01	3,76	4,52
<i>Groove, moment on support, ext. cladding - increased temp.</i>	1,39	2,09	2,79	3,49	4,20
<i>Groove, moment on support, int. cladding - normal temp.</i>	1,17	1,76	2,35	2,94	3,53
<i>Groove, moment on support, int. cladding - increased temp.</i>	1,11	1,67	2,23	2,80	3,36
<i>Micro, moment in span, ext. cladding - normal temp.</i>	1,66	2,49	3,33	4,17	5,00
<i>Micro, moment in span, ext. cladding - increased temp.</i>	1,55	2,33	3,11	3,90	4,68
<i>Micro, moment in span, int. cladding - normal temp.</i>	1,21	1,82	2,43	3,05	3,66
<i>Micro, moment in span, int. cladding - increased temp.</i>	1,14	1,72	2,29	2,87	3,44
<i>Micro, moment on support, ext. cladding - normal temp.</i>	1,30	1,96	2,61	3,27	3,93
<i>Micro, moment on support, ext. cladding - increased temp.</i>	1,19	1,80	2,40	3,00	3,60
<i>Micro, moment on support, int. cladding - normal temp.</i>	1,00	1,50	2,00	2,51	3,01
<i>Micro, moment on support, int. cladding - increased temp.</i>	0,95	1,44	1,92	2,40	2,88
<i>Smooth, moment in span, ext. cladding - normal temp.</i>	0,93	1,39	1,86	2,33	2,80
<i>Smooth, moment in span, ext. cladding - increased temp.</i>	0,85	1,29	1,72	2,15	2,58
<i>Smooth, moment in span, int. cladding - normal temp.</i>	0,58	0,88	1,17	1,47	1,76
<i>Smooth, moment in span, int. cladding - increased temp.</i>	0,56	0,84	1,12	1,40	1,68
<i>Smooth, moment on support, ext. cladding - normal temp.</i>	0,71	1,07	1,43	1,79	2,15
<i>Smooth, moment on support, ext. cladding - increased temp.</i>	0,66	0,99	1,32	1,66	1,99
<i>Smooth, moment on support, int. cladding - normal temp.</i>	0,48	0,73	0,97	1,22	1,46
<i>Smooth, moment on support, int. cladding - increased temp.</i>	0,46	0,69	0,92	1,15	1,38
Critical stress 140-220 [MPa]:					
	L(line)	R(groove)	M(micro)	E(smooth)	
<i>Panel thickness [mm]</i>	140-220	140-220	140-220	140-220	
<i>Ext. side - span - ambient temp.</i>	92	78	67	37	
<i>Ext. side - span - increased temp.</i>	89	75	65	36	
<i>Ext. side - support - ambient temp.</i>	82	69	60	33	
<i>Ext. side — support — increased temp.</i>	79	67	58	32	
<i>Int. side - span - ambient temp.</i>	72	60	52	25	
<i>Int. side - span - increased temp.</i>	70	59	50	24	
<i>Int. side - support - ambient temp.</i>	60	50	43	21	
<i>Int. side - support - increased temp.</i>	58	49	42	20	
Bending moment 140-220 [MPa]:					
<i>Panel thickness [mm]</i>	140	160	180	200	220
<i>Line, moment in span, ext. cladding - normal temp.</i>	5,78	6,61	7,43	8,26	9,09
<i>Line, moment in span, ext. cladding - increased temp.</i>	5,59	6,39	7,19	7,99	8,79
<i>Line, moment in span, int. cladding - normal temp.</i>	3,62	4,14	4,65	5,17	5,69
<i>Line, moment in span, int. cladding - increased temp.</i>	3,52	4,02	4,52	5,03	5,53
<i>Line, moment on support, ext. cladding - normal temp.</i>	5,34	6,10	6,87	7,63	8,40
<i>Line, moment on support, ext. cladding - increased temp.</i>	5,21	5,96	6,71	7,45	8,20
<i>Line, moment on support, int. cladding - normal temp.</i>	3,01	3,45	3,88	4,31	4,74
<i>Line, moment on support, int. cladding - increased temp.</i>	2,91	3,33	3,75	4,17	4,58
<i>Groove, moment in span, ext. cladding - normal temp.</i>	4,9	5,6	6,3	7,00	7,71
<i>Groove, moment in span, ext. cladding - increased temp.</i>	4,71	5,38	6,06	6,73	7,41
<i>Groove, moment in span, int. cladding - normal temp.</i>	3,01	3,45	3,88	4,31	4,74
<i>Groove, moment in span, int. cladding - increased temp.</i>	2,96	3,39	3,81	4,24	4,66
<i>Groove, moment on support, ext. cladding - normal temp.</i>	4,52	5,17	5,82	6,47	7,11

General characteristics	Performance									
	4,4		5,03		5,66		6,29		6,92	
Groove, moment on support, ext. cladding - increased temp.	4,4		5,03		5,66		6,29		6,92	
Groove, moment on support, int. cladding - normal temp	2,51		2,87		3,23		3,59		3,95	
Groove, moment on support, int. cladding - increased temp.	2,46		2,81		3,17		3,52		3,87	
Micro, moment in span, ext. cladding - normal temp.	4,21		4,81		5,41		6,02		6,62	
Micro, moment in span, ext. cladding - increased temp.	4,08		4,67		5,25		5,84		6,42	
Micro, moment in span, int. cladding - normal temp.	2,61		2,99		3,36		3,74		4,11	
Micro, moment in span, int. cladding - increased temp.	2,51		2,87		3,23		3,59		3,95	
Micro, moment on support, ext. cladding - normal temp	3,89		4,45		5,01		5,57		6,13	
Micro, moment on support, ext. cladding - increased temp.	3,77		4,31		4,85		5,39		5,93	
Micro, moment on support, int. cladding - normal temp	2,16		2,47		2,78		3,09		3,4	
Micro, moment on support, int. cladding - increased temp.	2,11		2,41		2,71		3,02		3,32	
Smooth, moment in span, ext. cladding - normal temp.	2,32		2,66		2,99		3,32		3,66	
Smooth, moment in span, ext. cladding - increased temp	2,26		2,58		2,91		3,23		3,56	
Smooth, moment in span, int. cladding - normal temp.	1,26		1,44		1,62		1,8		1,98	
Smooth, moment in span, int. cladding - increased temp.	1,21		1,38		1,55		1,72		1,90	
Smooth, moment on support, ext. cladding - normal temp.	2,14		2,44		2,75		3,05		3,36	
Smooth, moment on support, ext. cladding - increased temp.	2,14		2,44		2,75		3,05		3,36	
Smooth, moment on support, int. cladding - normal temp.	1,05		1,21		1,36		1,51		1,66	
Smooth, moment on support, int. cladding - increased temp.	1,00		1,15		1,29		1,44		1,58	
Panel Thickness[mm]	40	60	80	100	120	140	160	180	200	220
Thermal conductivity; U	0,55	0,35	0,26	0,21	0,18	0,15	0,13	0,12	0,11	0,11
Thermal conductivity coefficient [$\lambda_{\text{declared}}$]	0,021									
Reaction to fire [panel thickness in mm]										
40 - 80	B-s2,d0									
100 - 200	B-s1,d0									
220	NPD									
Resistance to fire [panel thickness in mm]										
40	NPD									
60 (panel with fire resistant swelling gasket)	EI 15									
80	EI 15									
100 - 200	EI 30									
220	NPD									
Bending tensile strength (ceilings)	NPD									
Water permeability	A									
Air permeability	<i>thrust</i>					<i>suction</i>				
	n=0,8388 c=0,0116					n=1,1072 c=0,0074				
Steam permeability	conforms									
Specific acoustic resistance; $R_w(C,C_{tr})$ [dB]	25(-2,-5)									
Acoustic absorption; α_w	NPD									
Durability	conforms									
Hazardous substances	NPD									

Web address where this Declaration of Performance is made available

www.izopanel.pl

Performance of the above product is in compliance with Declared Performance Package. This Declaration of Performance is issued, in accordance with Regulation (EU) no.305/2011, at the sole responsibility of the manufacturer as indicated above.

On behalf of the manufacturer signed by:

Karol Pawłowski

(full name)

Gdańsk, dnia 01.07.2021

(place and date)

Pierson

(signature)