

## DECLARATION OF PERFORMANCE

No 07.03/W-PIR-N

1. Unique identification code of the product –type:

IzoWall PIR-N

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	0,025				
Shear modulus; $G_c$ [MPa]					
40-120	0,04				
140-220	0,028				
<b>Critical stress 40-120 [MPa]:</b>	<b>L(line)</b>	<b>R(groove)</b>	<b>M(micro)</b>	<b>E(smooth)</b>	
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	
<b>Bending moment 40-120 [kNm/m]:</b>					
<b>Panel thickness [mm]</b>	<b>40</b>	<b>60</b>	<b>80</b>	<b>100</b>	<b>120</b>
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
<b>Critical stress 140-220 [MPa]:</b>	<b>L(line)</b>	<b>R(groove)</b>	<b>M(micro)</b>	<b>E(smooth)</b>	
<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	
<b>Bending moment 140-220 [kNm/m]:</b>					
<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									
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	0,57	0,37	0,27	0,22	0,18	0,16	0,14	0,12	0,11	0,1
Thermal conductivity coefficient [ $\lambda_{\text{declared}}$ ]	0,022									
Reaction to fire [panel thickness in mm]										
40 - 200	B-s2,d0									
Resistance to fire [panel thickness in mm]										
40-60	NPD									
80-200	EI 15									
Bending tensile strength (ceilings)	NPD									
Water permeability	A									
Air permeability	thrust					suction				
	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; $\alpha_w$	0,15									
Durability	conforms									
Hazardous substances	NPD									

Web address where this Declaration of Performance is made available

[www.izopanel.pl](http://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)



(signature)