DECLARATION OF PERFORMANCE

No 16.02/R+ -PIR+

1. Unique identification code of the product-type:

IzoRoof+ PIR+

2. Intended use or uses:

Elements of roofing

3. Producent:

IZOPANEL Sp. z o.o.
ul. Budowlanych 36, 80-298 Gdańsk
Tel.: **+48 58 340 17 17**, Fax: **+48 58 340 17 18**, E-mail: **info@izopanel.pl**

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

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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 strenght; f_{ct} [MPa]	
60 -120	0,08
140 - 160	0,07
Compressive strenght; f_{cc} [MPa]	
60 -120	0,1
140 - 160	0,09
Shear strenght; f_{cv}[MPa]	
60 -120	0,1
140 - 160	0,07
Creep coefficient; $\varphi_{t=2000h}$	1,57
Creep coefficient; $\varphi_{t=100000h}$	2,44
Long-term shear strenght; f_{cvt} [MPa]	
60 -120	0,04
140 - 160	0,028
Shear modulus; G_c [MPa]	
60 -120	2,5
140 - 160	2,1

Critical stress [MPa]:	**L**(line)		**R**(groove)		**M**(micro)		**E**(smooth)	
Panel thickness [mm]	60-120	140-160	60-120	140-160	60-120	140-160	60-120	140-160
Int. side - span - ambient temp.	119	72	100	60	85	52	41	25
Int. side - span - increased temp.	112	70	94	59	80	50	39	24
Int. side - support - ambient temp.	98	68	82	57	70	49	34	24
Int. side - support - increased temp.	93	66	78	55	67	47	32	23
	T(trapeze)							
Ext. side - span - ambient temp.	213	213	213	213	213	213	213	213
Ext. side - span - increased temp.	206	206	206	206	206	206	206	206
Ext. side - support - ambient temp.	250	250	250	250	250	250	250	250
Ext. side — support — increased temp.	250	250	250	250	250	250	250	250

Bending moment [MPa]:						
Panel thickness [mm]	60	80	100	120	140	160
Line, moment in span, ext. cladding - normal temp.	6,28	8,19	10,11	12,03	13,94	15,86
Line, moment in span, ext. cladding - increased temp.	6,07	7,92	9,78	11,63	13,49	15,34
Line, moment in span, int. cladding - normal temp.	2,81	3,66	4,52	5,38	3,77	4,29

General characteristics	Performance					
Line, moment in span, int. cladding - increased temp.	2,64	3,45	4,25	5,06	3,67	4,17
Line, moment on support, ext. cladding - normal temp.	7,37	9,62	11,87	14,12	16,37	18,62
Line, moment on support, ext. cladding - increased temp.	7,37	9,62	11,87	14,12	16,37	18,62
Line, moment on support, int. cladding - normal temp.	2,31	3,02	3,72	4,43	3,56	4,05
Line, moment on support, int. cladding - increased temp.	2,19	2,86	3,53	4,20	3,46	3,93
Groove, moment in span, ext. cladding - normal temp.	6,28	8,19	10,11	12,03	13,94	15,86
Groove, moment in span, ext. cladding - increased temp.	6,07	7,92	9,78	11,63	13,49	15,34
Groove, moment in span, int. cladding - normal temp.	2,36	3,08	3,80	4,52	3,14	3,57
Groove, moment in span, int. cladding - increased temp.	2,22	2,89	3,57	4,25	3,09	3,51
Groove, moment in support, ext. cladding - normal temp	7,37	9,62	11,87	14,12	16,37	18,62
Groove, moment on support, ext. cladding - increased temp.	7,37	9,62	11,87	14,12	16,37	18,62
Groove, moment on support, int. cladding - normal temp	1,93	2,52	3,11	3,70	2,99	3,40
Groove, moment on support, int. cladding - increased temp.	1,84	2,40	2,96	3,52	2,88	3,28
Micro, moment in span, ext. cladding - normal temp.	6,28	8,19	10,11	12,03	13,94	15,86
Micro, moment in span, ext. cladding - increased temp.	6,07	7,92	9,78	11,63	13,49	15,34
Micro, moment in span, int. cladding - normal temp.	2,00	2,62	3,23	3,84	2,72	3,10
Micro, moment in span, int. cladding - increased temp.	1,89	2,46	3,04	3,61	2,62	2,98
Micro, moment on support, ext. cladding - normal temp	7,37	9,62	11,87	14,12	16,37	18,62
Micro, moment on support, ext. cladding - increased temp.	7,37	9,62	11,87	14,12	16,37	18,62
Micro, moment on support, int. cladding - normal temp	1,65	2,15	2,66	3,16	2,57	2,92
Micro, moment on support, int. cladding - increased temp.	1,58	2,06	2,54	3,03	2,46	2,80
Smooth, moment in span, ext. cladding - normal temp.	6,28	8,19	10,11	12,03	13,94	15,86
Smooth, moment in span, ext. cladding - increased temp	6,07	7,92	9,78	11,63	13,49	15,34
Smooth, moment in span, int. cladding - normal temp.	0,97	1,26	1,56	1,85	1,31	1,49
Smooth, moment in span, int. cladding - increased temp.	0,92	1,20	1,48	1,76	1,26	1,43
Smooth, moment on support, ext. cladding - normal temp.	7,37	9,62	11,87	14,12	16,37	18,62
Smooth, moment on support, ext. cladding - increased temp.	7,37	9,62	11,87	14,12	16,37	18,62
Smooth, moment on support, int. cladding - normal temp.	0,80	1,05	1,29	1,54	1,26	1,43
Smooth, moment on support, int. cladding - increased temp.	0,75	0,98	1,22	1,45	1,20	1,37
Panel thickness [mm]	60	80	100	120	140	160
Thermal conductivity; U	0,35	0,27	0,21	0,18	0,16	0,14
Thermal conductivity coefficient [$\lambda_{declared}$]	0,022					
Impact of external fire– roofs[B_{roof}]	Broof					
Reaction to fire [panel thickness in mm]]:						
60 -160	B-s2,d0					
Resistance to fire [panel thickness in mm]						
60 -80	NPD					
100 - 160	REI 20					
Water permeability	NPD					
Air permeability	*thrust*			*suction*		
	n=0,664 c=0,109			n=0,449 c=0,166		
Steam permeability	NPD					
Specific acoustic resistance; $R_w(C,C_{tr})$ [dB]						
60-120	NPD					
140-160	NPD					
Acoustic absorption; α_w						
60-120	NPD					
140-160	NPD					
Dimensional tolerances	Fulfills					
Durability	Fulfills					
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 26.07.2017r.

(place and date)

(signature)