

**DECLARATION OF PERFORMANCE****No. PIR-ST/14509/2020/2**

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1. **Unique identification code of the product-type:** Wall panel PIR STANDARD (PU-PIR-W-ST)
2. **Intended use/es:** Self-supporting sandwich panels with rigid polyisocyanurate (PIR) foam core as external walls, wall cladding, partition walls and ceilings
3. **Manufacturer BALEX METAL sp. z o.o.:** ul. Wejherowska 12C, 84-239 Bolszewo
4. **System for assessment and verification of functional properties stability:** 3
5. **Harmonised standard:** PN-EN 14509:2013
6. **Notified body/ies:** Instytut Techniki Budowlanej (no. 1488); Warringtonfire (no. 0833); FIRES S.R.O. (no. 1396)
7. **Declared performance/s:** Table 1

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.

**BALEXMETAL Sp. z o.o.**
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Bolszewo, 22 December 2020

Signed in the name of the manufacturer by:
Certification manager

dr inż. Adam Wawrzynowicz


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Table 1: Essential characteristics

Panel thickness [mm]		40	50	60	80	100	110	120	130	
Cladding steel grade		S250GD, 1.4301								
Type of coating	metallic	Z100, Z185, Z225, Z275, AZ150, AZ185, ZA130, ZA255								
	organic	SP, HDP, PVD(F), PVC(P), PVC(F), PUR								
Cladding thickness	external [mm]	0,5; 0,6; 0,7								
	internal [mm]	0,4; 0,5; 0,6; 0,7								
Cladding profile types	external	L (Lined), M (Micro-profile), G (Plain), C (Clearline)								
	internal	L (Lined), G (Plain)								
Core material		PIR								
Nominal core density [kg/m ³]		40								
Mass of panel [kg/m ²]		10,3	10,6	11,1	11,8	12,6	12,9	13,2	13,5	
Reaction to fire		B-s1,d0								
Fire resistance of walls		NPD	NPD	NPD	NPD	EI20/EW30				
Tensile strenght f_{ct} [MPa]		0,08								
Shear strenght f_{cw} [MPa]		0,14	0,13	0,13	0,12			0,11		
Shear modulus G_c [MPa]		3,5							3,4	
Compressive strenght f_{cc} [MPa]		0,13								
Wrinkling strenght	In span:	external cladding [MPa]	M: 249 L: 111 G,C: 83	M: 249 L: 110 G,C: 84	M: 249 L: 109 G,C: 85	M: 249 L: 106 G,C: 87	M: 249 L: 104 G,C: 87	M: 249 L: 103 G,C: 87	M: 249 L: 102 G,C: 87	M: 241 L: 102 G,C: 85
		external cladding at increased temp. [MPa]	M: 227 L: 101 G,C: 76	M: 227 L: 100 G,C: 76	M: 227 L: 99 G,C: 77	M: 227 L: 97 G,C: 79	M: 227 L: 95 G,C: 79	M: 227 L: 94 G,C: 79	M: 227 L: 93 G,C: 79	M: 219 L: 93 G,C: 78
		internal cladding [MPa]	L: 139 G: 83	L: 138 G: 84	L: 136 G: 85	L: 133 G: 87	L: 131 G: 87	L: 129 G: 87	L: 128 G: 87	L: 128 G: 85
	At a support:	external cladding [MPa]	M: 174 L: 78 G,C: 58	M: 174 L: 77 G,C: 58	M: 174 L: 76 G,C: 59	M: 174 L: 75 G,C: 61	M: 174 L: 74 G,C: 61	M: 174 L: 72 G,C: 61	M: 174 L: 71 G,C: 61	M: 168 L: 71 G,C: 60
		external cladding at increased temp. [MPa]	M: 159 L: 71 G,C: 53	M: 159 L: 70 G,C: 53	M: 159 L: 69 G,C: 54	M: 159 L: 68 G,C: 54	M: 159 L: 66 G,C: 55	M: 159 L: 65 G,C: 55	M: 159 L: 65 G,C: 55	M: 154 L: 65 G,C: 54
		internal cladding [MPa]	L: 125 G: 75	L: 121 G: 74	L: 116 G: 72	L: 107 G: 70	L: 99 G: 70	L: 94 G: 70	L: 90 G: 70	L: 90 G: 68
	Correlation coefficient, external cladding		d=0,6mm: 0,88 for L; 0,81 for M d=0,7mm: 0,79 for L; 0,73 for M							
	Correlation coefficient, internal cladding		d=0,5mm: 0,8 for L; d=0,6mm: 0,7 for L; d=0,7mm: 0,63 for L							
	Heat conductivity coefficient λ_D [W/mK]		0,022							
	Heat transfer coefficient $U_{d,S}$ [W/m ² K]		0,59	0,45	0,36	0,27	0,22	0,2	0,19	0,17
Water permeability [m ³ /hm ²]		Class A								
Air permeability [m ³ /hm ²]		≤0,2								
Water vapour permeability		Impermeable								
Sound insulation [dB]		$R_w \geq 25$, $R_{11} \geq 23$, $R_{12} \geq 21$								
Sound absorption		$\alpha = 0,1$								
Durability		Pass DUR 1								