

DECLARATION OF PERFORMANCE

No PIR-F/2023/1

1. **Unique identification code of the product-type:** PU-PIR-F <d_N> <t_{Ne}/t_{Ni}>
2. **Intended use/es:** external walls and wall cladding, walls (including partitions) and ceilings within the building envelope
3. **Manufacturer:** BALEX METAL Sp. z o.o., ul. Wejherowska 12C, 84-239 Bolszewo
4. **System of Assessment and Verification of Constancy of Performance:** 1
5. **Harmonised standard:** EN 14509:2013
6. **Notified body:**
System 1 - Technický a Skúšobný Ústav Stavebný, n. o. (No 1301)
System 3 – Fires, s.r.o. (No 1396)
7. **Declared performances:** Tables 1÷12

Steel facing profiling designations:

L – lined; M - micro-profile; 1L – clearline; 2L – double clearline; G – plain

Other designations:

d_{Ne} – nominal thickness of the sandwich panel [mm]

t_{Ne} – nominal external facing thickness [mm]

t_{Ni} – nominal internal facing thickness [mm]

AVCP - System of Assessment and Verification of Constancy of Performance

NPD – No Performance Determined

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Chief Executive Officer



Marek Dzikiewicz

Bolszewo, 31.08.2023

BALEX METAL Sp. z o.o.
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P-191112216

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Table 1: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,7, t_{Ni} = 0,4)

		Nominal thickness d _N [mm]	120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength σ_m [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f_{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f_{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G_c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient ϕ_t (ceilings)		4	$\phi_{2000} = 1,05; \phi_{100000} = 1,43$				
	Shear strength f_{cv} long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive		M	4	190	189	189	189
			L	4	150	155	157	158
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature		M	4	180	180	180	180
			L	4	143	147	149	150
			G, 1L, 2L	4	98	95	93	93
	Wrinkling stress σ_w [MPa] negative		L	4	179	158	148	143
			G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative		M	4	127	125	124	123
			L	4	103	100	98	97
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature		M	4	121	119	118	117
			L	4	79	74	72	71
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive		L	4	127	117	113	111	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient $U_{d,s}$ [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values n and C		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R_w (C , C_{tr}) [dB]		4	$R_w \geq 25$, $R_{A1} \geq 23$, $R_{A2} \geq 21$					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

*- valid under the conditions specified in the classification report

** - panels with EPDM gasket

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Table 2: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,7, t_{Ni} = 0,5)

Nominal thickness d _N [mm]			120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength $\bar{\sigma}_m$ [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f _{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f _{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G _c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)		4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f _{cv} long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress $\bar{\sigma}_w$ [MPa] positive		M	4	190	189	189	189
			L	4	150	155	157	158
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress $\bar{\sigma}_w$ [MPa] positive elevated temperature		M	4	180	180	180	180
			L	4	143	147	149	150
			G, 1L, 2L	4	98	95	93	93
	Wrinkling stress $\bar{\sigma}_w$ [MPa] negative		L	4	153	136	127	122
			G	4	83	78	76	75
	Wrinkling stress $\bar{\sigma}_w$ over support [MPa] negative		M	4	127	125	124	123
			L	4	103	100	98	97
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress $\bar{\sigma}_w$ over support [MPa] negative elevated temperature		M	4	121	119	118	117
			L	4	79	74	72	71
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress $\bar{\sigma}_w$ over support [MPa] positive		L	4	109	101	97	95	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient U _{d,s} [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values n and C		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R _w (C, C _{tr}) [dB]		4	R _w ≥25, R _{A1} ≥23, R _{A2} ≥21					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

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** - panels with EPDM gasket

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Table 3: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,7, t_{Ni} = 0,6)

Nominal thickness d _N [mm]		120	160	180	200		
Mechanical resistance	Essential characteristics	AVCP	Performances				
	Compressive strength σ_m [MPa]	4	0,14	0,13	0,12	0,10	
	Tensile strength f _{ct} [MPa]	4	0,08	0,08	0,06	0,06	
	Shear strength f _{cv} [MPa]	4	0,13	0,12	0,11	0,09	
	Shear modulus G _c [MPa]	4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)	4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f _{cv} long-term [MPa] (ceilings)	4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive	M	4	190	189	189	189
		L	4	150	155	157	158
		G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature	M	4	180	180	180	180
		L	4	143	147	149	150
		G, 1L, 2L	4	98	95	93	93
	Wrinkling stress σ_w [MPa] negative	L	4	136	120	112	108
		G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative	M	4	127	125	124	123
		L	4	103	100	98	97
		G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature	M	4	121	119	118	117
		L	4	79	74	72	71
G, 1L, 2L		4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive	L	4	96	89	86	84	
	G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient U _{d,s} [W/(m ² K)]	4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]	4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**				
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60	
Flexural tensile strength (ceilings)		4	NPD				
Water permeability; classification		4	NPD				
Air permeability; values n and C		4	NPD				
Water vapour permeability; coefficient μ		4	Pass				
Airborne sound insulation; ratings R _w (C, C _{tr}) [dB]		4	R _w ≥25, R _{A1} ≥23, R _{A2} ≥21				
Sound absorption; rating α_w		4	NPD				
Durability	DUR1	4	Pass				
	Resistance to point loads and access loads (ceilings)	4	NPD				
Dangerous substances		3	NPD				

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** - panels with EPDM gasket

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Table 4: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,7, t_{Ni} = 0,7)

Nominal thickness d _N [mm]			120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength $\bar{\sigma}_m$ [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f _{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f _{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G _c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)		4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f _{cv} long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress $\bar{\sigma}_w$ [MPa] positive		M	4	190	189	189	189
			L	4	150	155	157	158
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress $\bar{\sigma}_w$ [MPa] positive elevated temperature		M	4	180	180	180	180
			L	4	143	147	149	150
			G, 1L, 2L	4	98	95	93	93
	Wrinkling stress $\bar{\sigma}_w$ [MPa] negative		L	4	121	107	100	97
			G	4	83	78	76	75
	Wrinkling stress $\bar{\sigma}_w$ over support [MPa] negative		M	4	127	125	124	123
			L	4	103	100	98	97
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress $\bar{\sigma}_w$ over support [MPa] negative elevated temperature		M	4	121	119	118	117
			L	4	79	74	72	71
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress $\bar{\sigma}_w$ over support [MPa] positive		L	4	86	80	77	75	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient U _{d,s} [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values n and C		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R _w (C, C _{tr}) [dB]		4	R _w ≥25, R _{A1} ≥23, R _{A2} ≥21					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

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** - panels with EPDM gasket

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Table 5: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,6, t_{Ni} = 0,4)

		Nominal thickness d _N [mm]	120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength σ_m [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f_{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f_{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G_c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)		4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f_{cv} , long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive		M	4	212	212	211	211
			L	4	168	173	176	177
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature		M	4	202	201	201	201
			L	4	160	164	166	168
			G, 1L, 2L	4	79	74	72	71
	Wrinkling stress σ_w [MPa] negative		L	4	179	158	148	143
			G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative		M	4	142	140	139	138
			L	4	115	112	110	109
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature		M	4	136	133	132	131
			L	4	110	106	105	104
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive		L	4	127	117	113	111	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient $U_{d,s}$ [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values n and C		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R_w (C , C_{tr}) [dB]		4	$R_w \geq 25, R_{A1} \geq 23, R_{A2} \geq 21$					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

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** - panels with EPDM gasket

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No PIR-F/2023/1

Table 6: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,6, t_{Ni} = 0,5)

Nominal thickness d _N [mm]			120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength σ_m [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f_{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f_{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G_c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)		4	$\varphi_{2000} = 1,05$; $\varphi_{100000} = 1,43$				
	Shear strength f_{cv} long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive		M	4	212	212	211	211
			L	4	168	173	176	177
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature		M	4	202	201	201	201
			L	4	160	164	166	168
			G, 1L, 2L	4	79	74	72	71
	Wrinkling stress σ_w [MPa] negative		L	4	153	136	127	122
			G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative		M	4	142	140	139	138
			L	4	115	112	110	109
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature		M	4	136	133	132	131
			L	4	110	106	105	104
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive		L	4	109	101	97	95	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient $U_{d,s}$ [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values <i>n</i> and <i>C</i>		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R_w (C , C_{tr}) [dB]		4	$R_w \geq 25$, $R_{A1} \geq 23$, $R_{A2} \geq 21$					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

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** - panels with EPDM gasket

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Table 7: Performances (PIR 40 kg/m³, Inox, S250GD + SF15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,6, t_{Ni} = 0,6)

Nominal thickness d _N [mm]			120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength σ_m [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f _{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f _{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G _c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)		4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f _{cv} long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive		M	4	212	212	211	211
			L	4	168	173	176	177
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature		M	4	202	201	201	201
			L	4	160	164	166	168
			G, 1L, 2L	4	79	74	72	71
	Wrinkling stress σ_w [MPa] negative		L	4	136	120	112	108
			G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative		M	4	142	140	139	138
			L	4	115	112	110	109
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature		M	4	136	133	132	131
			L	4	110	106	105	104
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive		L	4	96	89	86	84	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient U _{d,s} [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values n and C		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R _w (C, C _{tr}) [dB]		4	R _w ≥25, R _{A1} ≥23, R _{A2} ≥21					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

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** - panels with EPDM gasket

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No PIR-F/2023/1

Table 8: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,6, t_{Ni} = 0,7)

Nominal thickness d _N [mm]			120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength σ_m [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f _{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f _{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G _c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)		4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f _{cv} long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive		M	4	212	212	211	211
			L	4	168	173	176	177
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature		M	4	202	201	201	201
			L	4	160	164	166	168
			G, 1L, 2L	4	79	74	72	71
	Wrinkling stress σ_w [MPa] negative		L	4	121	107	100	97
			G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative		M	4	142	140	139	138
			L	4	115	112	110	109
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature		M	4	136	133	132	131
			L	4	110	106	105	104
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive		L	4	86	80	77	75	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient U _{d,s} [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values n and C		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R _w (C, C _{tr}) [dB]		4	R _w ≥25, R _{A1} ≥23, R _{A2} ≥21					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

*- valid under the conditions specified in the classification report

** - panels with EPDM gasket

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Table 9: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,5, t_{Ni} = 0,4)

Nominal thickness d _N [mm]		120	160	180	200		
Mechanical resistance	Essential characteristics	AVCP	Performances				
	Compressive strength σ_m [MPa]	4	0,14	0,13	0,12	0,10	
	Tensile strength f_{ct} [MPa]	4	0,08	0,08	0,06	0,06	
	Shear strength f_{cv} [MPa]	4	0,13	0,12	0,11	0,09	
	Shear modulus G_c [MPa]	4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)	4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f_{cv} , long-term [MPa] (ceilings)	4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive	M	4	250	249	249	249
		L	4	201	206	209	211
		G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature	M	4	238	237	237	237
		L	4	191	196	198	200
		G, 1L, 2L	4	79	74	72	71
	Wrinkling stress σ_w [MPa] negative	L	4	179	158	148	143
		G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative	M	4	168	165	163	163
		L	4	138	133	131	130
		G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature	M	4	160	157	155	155
		L	4	131	127	125	124
G, 1L, 2L		4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive	L	4	127	117	113	111	
	G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient $U_{d,s}$ [W/(m ² K)]	4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]	4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**				
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60	
Flexural tensile strength (ceilings)		4	NPD				
Water permeability; classification		4	NPD				
Air permeability; values n and C		4	NPD				
Water vapour permeability; coefficient μ		4	Pass				
Airborne sound insulation; ratings R_w (C , C_{tr}) [dB]		4	$R_w \geq 25$, $R_{A1} \geq 23$, $R_{A2} \geq 21$				
Sound absorption; rating α_w		4	NPD				
Durability	DUR1	4	Pass				
	Resistance to point loads and access loads (ceilings)	4	NPD				
Dangerous substances		3	NPD				

*- valid under the conditions specified in the classification report

** - panels with EPDM gasket

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Table 10: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,5, t_{Ni} = 0,5)

Nominal thickness d _N [mm]			120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength σ_m [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f _{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f _{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G _c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)		4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f _{cv} long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive		M	4	250	249	249	249
			L	4	201	206	209	211
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature		M	4	238	237	237	237
			L	4	191	196	198	200
			G, 1L, 2L	4	79	74	72	71
	Wrinkling stress σ_w [MPa] negative		L	4	153	136	127	122
			G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative		M	4	168	165	163	163
			L	4	138	133	131	130
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature		M	4	160	157	155	155
			L	4	131	127	125	124
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive		L	4	109	101	97	95	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient U _{d,s} [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values n and C		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R _w (C, C _r) [dB]		4	R _w ≥25, R _{A1} ≥23, R _{A2} ≥21					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

*- valid under the conditions specified in the classification report

** - panels with EPDM gasket

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Table 11: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,5, t_{Ni} = 0,6)

Nominal thickness d _N [mm]		120	160	180	200		
Mechanical resistance	Essential characteristics	AVCP	Performances				
	Compressive strength σ_m [MPa]	4	0,14	0,13	0,12	0,10	
	Tensile strength f_{ct} [MPa]	4	0,08	0,08	0,06	0,06	
	Shear strength f_{cv} [MPa]	4	0,13	0,12	0,11	0,09	
	Shear modulus G_c [MPa]	4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)	4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f_{cv} long-term [MPa] (ceilings)	4	0,07	0,07	0,06	0,05	
	Wrinkling stress σ_w [MPa] positive	M	4	250	249	249	249
		L	4	201	206	209	211
		G, 1L, 2L	4	83	78	76	75
	Wrinkling stress σ_w [MPa] positive elevated temperature	M	4	238	237	237	237
		L	4	191	196	198	200
		G, 1L, 2L	4	79	74	72	71
	Wrinkling stress σ_w [MPa] negative	L	4	136	120	112	108
		G	4	83	78	76	75
	Wrinkling stress σ_w over support [MPa] negative	M	4	168	165	163	163
		L	4	138	133	131	130
		G, 1L, 2L	4	57	50	47	46
	Wrinkling stress σ_w over support [MPa] negative elevated temperature	M	4	160	157	155	155
		L	4	131	127	125	124
G, 1L, 2L		4	54	48	45	44	
Wrinkling stress σ_w over support [MPa] positive	L	4	96	89	86	84	
	G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient $U_{d,s}$ [W/(m ² K)]	4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]	4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**				
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60	
Flexural tensile strength (ceilings)		4	NPD				
Water permeability; classification		4	NPD				
Air permeability; values n and C		4	NPD				
Water vapour permeability; coefficient μ		4	Pass				
Airborne sound insulation; ratings R_w (C , C_{tr}) [dB]		4	$R_w \geq 25$, $R_{A1} \geq 23$, $R_{A2} \geq 21$				
Sound absorption; rating α_w		4	NPD				
Durability	DUR1	4	Pass				
	Resistance to point loads and access loads (ceilings)	4	NPD				
Dangerous substances		3	NPD				

*- valid under the conditions specified in the classification report

** - panels with EPDM gasket

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Table 12: Performances (PIR 40 kg/m³, Inox, S250GD + SP15, SP25, SP35, Cesar55, PVC(F) 120; t_{Ne} = 0,5, t_{Ni} = 0,7)

Nominal thickness d _N [mm]			120	160	180	200		
Mechanical resistance	Essential characteristics		AVCP	Performances				
	Compressive strength $\bar{\sigma}_m$ [MPa]		4	0,14	0,13	0,12	0,10	
	Tensile strength f_{ct} [MPa]		4	0,08	0,08	0,06	0,06	
	Shear strength f_{cv} [MPa]		4	0,13	0,12	0,11	0,09	
	Shear modulus G_c [MPa]		4	3,6	3,5	3,4	3,2	
	Creep coefficient φ_t (ceilings)		4	$\varphi_{2000} = 1,05; \varphi_{100000} = 1,43$				
	Shear strength f_{cv} long-term [MPa] (ceilings)		4	0,07	0,07	0,06	0,05	
	Wrinkling stress $\bar{\sigma}_w$ [MPa] positive		M	4	250	249	249	249
			L	4	201	206	209	211
			G, 1L, 2L	4	83	78	76	75
	Wrinkling stress $\bar{\sigma}_w$ [MPa] positive elevated temperature		M	4	238	237	237	237
			L	4	191	196	198	200
			G, 1L, 2L	4	79	74	72	71
	Wrinkling stress $\bar{\sigma}_w$ [MPa] negative		L	4	121	107	100	97
			G	4	83	78	76	75
	Wrinkling stress $\bar{\sigma}_w$ over support [MPa] negative		M	4	168	165	163	163
			L	4	138	133	131	130
			G, 1L, 2L	4	57	50	47	46
	Wrinkling stress $\bar{\sigma}_w$ over support [MPa] negative elevated temperature		M	4	160	157	155	155
			L	4	131	127	125	124
G, 1L, 2L			4	54	48	45	44	
Wrinkling stress $\bar{\sigma}_w$ over support [MPa] positive		L	4	86	80	77	75	
		G	4	59	58	58	58	
Thermal transmittance	Thermal transmittance coefficient $U_{d,s}$ [W/(m ² K)]		4	0,18	0,14	0,12	0,11	
	Thermal conductivity coefficient λ_D [W/(mK)]		4	0,022				
Reaction to fire; classification*		1	B-s1,d0 B-s2,d0**					
Fire resistance of walls; classification*		3	EI30	EI45	EI45	EI60		
Flexural tensile strength (ceilings)		4	NPD					
Water permeability; classification		4	NPD					
Air permeability; values n and C		4	NPD					
Water vapour permeability; coefficient μ		4	Pass					
Airborne sound insulation; ratings R_w (C , C_{tr}) [dB]		4	$R_w \geq 25$, $R_{A1} \geq 23$, $R_{A2} \geq 21$					
Sound absorption; rating α_w		4	NPD					
Durability	DUR1		4	Pass				
	Resistance to point loads and access loads (ceilings)		4	NPD				
Dangerous substances		3	NPD					

*- valid under the conditions specified in the classification report.

** - panels with EPDM gasket

