

Declaration of Performance			
Number: PFLAUM FE-FEM 2023 IFBS			
1	Unique identification code of the product type: PFLAUM FE/FEM		
2	Intended use: Self-supporting application as a wall		
3	producer: Pflaum & Söhne Bausysteme GmbH Ganglgutstrasse 89 A-4050 Traun		
5	System of control for performance values (AVCP): System 1		
6a	EN 14509:2013 NB 0769 KIT Karlsruher Institut of Technology		
7	Declared Performance		
Material characteristics	Panel thickn.	Declared performances	Harmonized technical specification
material		steel \geq S320 GD + Z275 acc EN 10346	EN 14509:2013
steel sheet thickness inside t_{Ni}		0.50, 0.55, 0.63, and 0.75mm	
steel sheet thickness outside t_{Na}		0.50, 0.55, 0.63 and 0.75mm	
coating system inside		PE in 12, 25, 35 or 50 μ m PVDF in 25, 35 or 60 μ m PUR 45, 60 or 85 μ m PVC 155 or 205 μ m	
coating system outside		PE in 12, 25, 35 or 50 μ m PVDF in 25, 35 or 60 μ m PUR 45, 60 or 85 μ m PVC 155 or 205 μ m	
mechanical values			
tensile strength f_{ct}	60 mm	0,14 MPa	EN 14509:2013
	80 mm	0,12 MPa	
	100 mm	0,10 Mpa	
	120 mm	0,09 Mpa	
	140-150 mm	0,07 MPa	
	160-180 mm	0,06 MPa	
	200 mm	0,05 MPa	
shear strength f_{cv} , short term	60-120 mm	0,05 MPa	
	140-200 mm	0,04 MPa	
shear strength f_{cv} , long term	60 -100 mm	0,03 MPa	
	120-200 mm	0,02 MPa	
shear modulus G_c	60-200 mm	5,8 MPa	
compressive strength f_{cc}	60-120 mm	0,06 MPa	
	140-200 mm	0,05 MPa	
core material		Mineral wool	EN 14509:2013
panel thickness		60, 80, 100, 120 , 140, 150, 160, 180, 200 mm	
density		100 kg/m ³	
weight	60 mm	15,3 kg/m ²	
	80 mm	17,3 kg/m ²	
	100 mm	19,3 kg/m ²	
	120 mm	21,3 kg/m ²	
	140 mm	23,3 kg/m ²	
	150 mm	24,3 kg/m ²	
	160 mm	25,3 kg/m ²	
	180 mm	27,3 kg/m ²	
200 mm	29,3 kg/m ²		

7 wrinkling stress steel sheet outside $t_{nom1} = 0,50mm$					
flat, O, 03, 05, 07, 09, 010, 011, R, G, MD, VD, VD2	in span	60 mm	121 MPa	EN 14509:2013	
		80 mm	115 MPa		
		100 mm	109 MPa		
		120 mm	104 MPa		
	140-200 mm	81 MPa			
in span, elevated temperature	60 mm	112 MPa			
	80 mm	107 MPa			
	100 mm	102 MPa			
	120 mm	96 MPa			
	140-200 mm	75 MPa			
at central support	60 mm	72 MPa			
	80 mm	69 MPa			
	100 mm	66 MPa			
	120 mm	62 MPa			
	140-200 mm	49 MPa			
at central support, elevated temperature	60 mm	67 MPa			
	80 mm	64 MPa			
	100 mm	60 MPa			
	120 mm	58 MPa			
	140-200 mm	45 MPa			
LD2	in span	60 mm	124 MPa	EN 14509:2013	
		80 mm	115 MPa		
		100 mm	106 MPa		
		120 mm	96 MPa		
		140-150 mm	87 MPa		
		160-180 mm	88 MPa		
	200 mm	89 MPa			
	in span, elevated temperature	60 mm	115 MPa		
		80 mm	107 MPa		
		100 mm	98 MPa		
		120 mm	90 MPa		
		140-150 mm	81 MPa		
		160-180 mm	82 MPa		
	200 mm	83 MPa			
	at central support	60 mm	75 MPa		
		80 mm	69 MPa		
100 mm		63 MPa			
120 mm		58 MPa			
140 mm		52 MPa			
150 mm		55 MPa			
160 mm		58 MPa			
180 mm		64 MPa			
200 mm	71 MPa				
at central support, elevated temperature	60 mm	69 MPa			
	80 mm	64 MPa			
	100 mm	59 MPa			
	120 mm	54 MPa			
	140 mm	49 MPa			
	150 mm	52 MPa			
	160 mm	55 MPa			
	180 mm	60 MPa			
200 mm	66 MPa				

7	wrinkling stress steel sheet inside $t_{nom1} = 0,50\text{mm}$			
0, 03, 05, 07, R, G	in span	60 mm 80 mm 100 mm 120 mm 140-200 mm	121 MPa 115 MPa 109 MPa 104 MPa 81 MPa	EN 14509:2013
	at central support	60 mm 80 mm 100 mm 120 mm 140-200 mm	72 MPa 69 MPa 66 MPa 62 MPa 49 MPa	
09, 010, 011	in span	60 mm 80 mm 100-120 mm 140-150 mm 160-180 mm 200 mm	110 MPa 111 MPa 112 MPa 113 MPa 114 MPa 115 MPa	EN 14509:2013
	at central support	60 mm 80-100 mm 120-140 mm 150 mm 160 mm 180 mm 200 mm	70 MPa 69 MPa 68 MPa 72 MPa 76 MPa 84 MPa 92 MPa	
7	reduction factor of wrinkling stress			
	reduction factor for steel sheet flat 09, 010, 011 (inside)	0,50mm	1,00	EN 14509:2013
		0,55mm	0,96	
		0,60mm	0,90	
		0,63mm	0,87	
		0,75mm	0,77	
	reduction factor for steel sheet flat 0, 03, 05, 07, R, G, 09, 010, 011, MD, VD, VD2 (outside)	0,50mm	1,00	EN 14509:2013
		0,55mm	1,00	
		0,60mm	1,00	
		0,63mm	1,00	
		0,75mm	1,00	
	reduction factor for steel sheet LD2	0,50mm	1,00	EN 14509:2013
		0,55mm	1,00	
		0,60mm	1,00	
		0,63mm	1,00	
		0,75mm	0,89	
	heat transfer coefficient (U-value)	60 mm	0,67 W/m ² K	EN 14509:2013
		80 mm	0,50 W/m ² K	
		100 mm	0,41 W/m ² K	
		120 mm	0,34 W/m ² K	
		140 mm	0,29 W/m ² K	
		150 mm	0,27 W/m ² K	
		160 mm	0,25 W/m ² K	
		180 mm	0,23 W/m ² K	
	200 mm	0,20 W/m ² K		
	thermal transmittance ($\lambda_{\text{Declared}}$)		0,042 W/(mK)	

7	reaction to fire		A2 - s1, d0 acc EN 13501-1	EN 14509:2013
	fire resistance			
FE	horizontal erection (EXAP)	120 -200 mm	EI 120 acc. EN 13501-2	EN 14509:2013
	vertical erection (EXAP)	100 mm	EI 45 acc. EN 13501-2	
		120 -200 mm	EI 120 acc. EN 13501-2	
	water permeability		NPD	EN 14509:2013
	air permeability		NPD	
	water-vapor permeability		passed	
	airborne sound insulation $R_w(C;Ctr)$	100-180mm 200mm	30 (-2;-4) dB acc EN 11654 31 (-1;-3) dB acc EN 11654	EN 14509:2013
	acoustic absorption α_w		NPD	EN 14509:2013
	durability		passed (all colours)	
	dangerous content		NPD	
8	Appropriate Technical Documentation and Specific Technical Documentation: span tables, Allgemeine bauaufsichtliche Zulassung/ Allgemeine Bauartgenehmigung Z-10.4-657			
	The performance of the above product corresponds to the declared performance For the preparation of the declaration of performance in accordance with Regulation (EU) no. 305/2011 is the sole responsibility of the above-mentioned manufacturer. Signed for and on behalf of the manufacturer from:			
	name und function	Ing. Königsmaier Harald, technical Manager		
	place and date	Traun 30.05.2023	signature	