

Declaration of Performance				
Number: PFLAUM FEI-module4 2023 IFBS				
1	Unique identification code of the product type: <b>PFLAUM FEI/FEI module4</b>			
2	Intended use: <b>Self-supporting application as a wall</b>			
3	producer: Pflaum & Söhne Bausysteme GmbH Ganglgutstrasse 89 A-4050 Traun			
5	System of control for performance values (AVCP): <b>System 1</b>			
6a	EN 14509:2013 NB 0769 KIT Karlsruher Institut of Technology			
7	<b>Declared Performance</b>			
	<b>Material characteristics</b>	<b>Panel thickn.</b>	<b>Declared performances</b>	<b>Harmonized technical specification</b>
	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 $\mu$ m PVDF in 25, 35 or 60 $\mu$ m PUR 45, 60 or 85 $\mu$ m PVC 155 or 205 $\mu$ m	
	coating system outside		PE in 12, 25, 35 or 50 $\mu$ m PVDF in 25, 35 or 60 $\mu$ m PUR 45, 60 or 85 $\mu$ m PVC 155 or 205 $\mu$ 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 $f_{cc}$	80-120 mm	0,06 MPa	
		140-200 mm	0,05 MPa	
	core material		Mineral wool	EN 14509:2013
	panel thickness		80, 100, 120, 140	
			150, 160, 180, 200 mm	
	density		100 kg/m <sup>3</sup>	
	weight	80 mm	17,8 kg/m <sup>2</sup>	
		100 mm	19,8 kg/m <sup>2</sup>	
		120 mm	21,8 kg/m <sup>2</sup>	
		140 mm	23,8 kg/m <sup>2</sup>	
		150 mm	24,8 kg/m <sup>2</sup>	
		160 mm	25,8 kg/m <sup>2</sup>	
		180 mm	27,8 kg/m <sup>2</sup>	
	200 mm	29,8 kg/m <sup>2</sup>		

7	wrinkling stress steel sheet outside $t_{nom1} = 0,50mm$				
	glatt, O, 03, 05, 07, 09, 010, 011, R, G, MD, VD, VD2	in span	80 mm	115 MPa	EN 14509:2013
			100 mm	109 MPa	
			120 mm	104 MPa	
			140-200 mm	81 MPa	
		in span, elevated temperature	80 mm	107 MPa	
			100 mm	102 MPa	
			120 mm	96 MPa	
			140-200 mm	75 MPa	
	at central support	80 mm	69 MPa		
		100 mm	66 MPa		
		120 mm	62 MPa		
		140-200 mm	49 MPa		
	at central support, elevated temperature	80 mm	64 MPa		
		100 mm	60 MPa		
		120 mm	58 MPa		
140-200 mm		45 MPa			
LD2	in span	80 mm	115 MPa	EN 14509:2013	
		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	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	80 mm	69 MPa		
		100 mm	63 MPa		
		120 mm	58 MPa		
		140 mm	52 MPa		
150 mm		55 MPa			
160 mm		58 MPa			
at central support, elevated temperature	180 mm	64 MPa			
	200 mm	71 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			
	wrinkling stress steel sheet inside $t_{nom1} = 0,50mm$				
	0, 03, 05, 07, R, G	in span	80 mm	115 MPa	EN 14509:2013
100 mm			109 MPa		
120 mm			104 MPa		
140-200 mm			81 MPa		
at central support		80 mm	69 MPa		
		100 mm	66 MPa		
120 mm	62 MPa				
140-200 mm	49 MPa				

7	09, 010, 011	in span	80 mm 100-120 mm 140-150 mm 160-180 mm 200 mm	115 MPa 114 MPa 113 MPa 114 MPa 115 MPa	EN 14509:2013
		at central support	80-100 mm 120-140 mm 150 mm 160 mm 180 mm 200 mm	69 MPa 68 MPa 72 MPa 76 MPa 84 MPa 92 MPa	
reduction factor of wrinkling stress					
reduction factor for steel sheet flat 09, 010, 011 (inside)		0,50mm 0,55mm 0,60mm 0,63mm 0,75mm		1,00 0,96 0,90 0,87 0,77	EN 14509:2013
reduction factor for steel sheet flat 0, 03, 05, 07, R,G, 09, 010, 011, MD, VD, VD2 (outside)		0,50mm 0,55mm 0,60mm 0,63mm 0,75mm		1,00 1,00 1,00 1,00 1,00	
reduction factor for steel sheet LD2		0,50mm 0,55mm 0,60mm 0,63mm 0,75mm		1,00 1,00 1,00 1,00 0,89	
density of core				100 kg/m <sup>3</sup>	
heat transfer coefficient (U-value)		60 mm 80 mm 100 mm 120 mm 140 mm 150 mm 160 mm 180 mm 200 mm		0,77 W/m <sup>2</sup> K 0,53 W/m <sup>2</sup> K 0,42 W/m <sup>2</sup> K 0,35 W/m <sup>2</sup> K 0,30 W/m <sup>2</sup> K 0,28 W/m <sup>2</sup> K 0,26 W/m <sup>2</sup> K 0,23 W/m <sup>2</sup> K 0,21 W/m <sup>2</sup> K	EN 14509:2013
thermal transmittance ( $\lambda_{\text{Declared}}$ )				0,042 W/(mK)	
reaction to fire				A2 - s1, d0 acc EN 13501-1	EN 14509:2013
fire resistance					
horizontal erection		120-200 mm		EI 30 acc. EN 13501-2	EN 14509:2013
vertical erection		120-200 mm		EI 60 acc. EN 13501-2	
water permeability				NPD	EN 14509:2013
air permeability				NPD	
water-vapor permeability				passed	
airborne sound insulation R w(C;Ctr)				30 (-1;-3) dB acc. EN 11654	EN 14509:2013
acoustic absorption $\alpha_w$				NPD	
durability				passend (all colors)	EN 14509:2013
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. Königsmayer Harald, technical Manager			
place and date		Traun 30.05.2023	signature 		