

DECLARATION OF PERFORMANCE
No 1S-R5M0-001
 According to regulation No 305/2011

Unique identification code of the product-type: **Self - supporting double skin metal faced insulating panels (sandwich panels) TENAX with MW core**

Product name:	TENAX R80 MW B	TENAX R120 MW B	TENAX R190 MW B
	TENAX R85 MW B	TENAX R125 MW B	TENAX R195 MW B
	TENAX R90 MW B	TENAX R130 MW B	TENAX R200 MW B
	TENAX R95 MW B	TENAX R135 MW B	TENAX R205 MW B
	TENAX R100 MW B	TENAX R140 MW B	TENAX R210 MW B
	TENAX R105 MW B	TENAX R145 MW B	TENAX R215 MW B
	TENAX R110 MW B	TENAX R150 MW B	TENAX R220 MW B
	TENAX R115 MW B	TENAX R155 MW B	TENAX R225 MW B
		TENAX R160 MW B	TENAX R230 MW B
		TENAX R165 MW B	TENAX R235 MW B
		TENAX R170 MW B	TENAX R240 MW B
		TENAX R175 MW B	TENAX R245 MW B
		TENAX R180 MW B	TENAX R250 MW B
		TENAX R185 MW B	

Intended use: **for roofs and roof claddings**

Manufacturer: **TENAX PANEL, SIA,
 Spodriibas 1, Dobeles, Latvia, LV- 3701**

System/s of AVCP: **Scheme 4**

Harmonised standard: **EN 14509:2013**

Notified Body: **-**

The performance of the product identified above is in conformity with the set of declared performance/s (see attachments No 1, No 2, No 3 and No 4).

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:
TENAX PANEL, SIA Product development director

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Uldis Reknors
15.02.2019.

**Declaration of Performance No 1S-R5M0-001, Annex 1**

Sandwich panels TENAX R80 MW B, TENAX R85 MW B, TENAX R90 MW B, TENAX R95 MW B

Year when CE mark was affixed	10			
Essential characteristics	Performance			
Metal facings				
Thickness, mm	0,5; 0,6; 0,7; 0,8			
Steel name	S250GD; S280GD; S320GD			
Organic coating type and thickness	SP25; PVDF35			
Core material				
MW density, kg/m ³	105			
Thermal conductivity, W/m·K	0,042			
Panel				
Thickness, mm	80	85	90	95
Panel weight, kg/m ² (metal thickness 0,5/0,5 mm)	17,3	17,8	18,3	18,9
Shear modulus of the core material, MPa	3,5	3,5	3,5	3,5
Shear strength of the panel, MPa	0,04	0,04	0,04	0,04
Long term shear strength, MPa	0,02	0,02	0,02	0,02
Creep coefficient				
- t = 2 000 h	0,4	0,4	0,4	0,4
- t = 100 000 h	0,6	0,6	0,6	0,6
Compressive strength of the core material, MPa	0,10	0,10	0,10	0,10
Cross-panel tensile strength, MPa	0,08	0,08	0,08	0,08
Wrinkling stress for inner face				
- in span	100	100	100	100
- for loads pressing at an internal support	90	90	90	90
Wrinkling stress for outer face, MPa				
- in span	100	100	100	100
- in span at elevated temperature	95	95	95	95
- for loads suction at an internal support	90	90	90	90
- for loads suction at an internal support at elevated temperature	85	85	85	85
Thermal transmittance, W/m ² ·K	0,50	0,47	0,45	0,42
Durability	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours
Resistance to point loads	NPD	NPD	NPD	NPD
Resistance to access loads, kPa	NPD	NPD	NPD	NPD
Reaction to fire	NPD	NPD	NPD	NPD
Fire resistance	NPD	NPD	NPD	NPD
External fire performance	B _{ROOF(1,12,13)}	B _{ROOF(1,12,13)}	B _{ROOF(1,12,13)}	B _{ROOF(1,12,13)}
Water permeability	NPD	NPD	NPD	NPD
Air permeability	NPD	NPD	NPD	NPD
Airborne sound insulation	NPD	NPD	NPD	NPD

Declaration of Performance No 1S-R5M0-001, Annex 2

Sandwich panels TENAX R100 MW B, TENAX R105 MW B, TENAX R110 MW B,
TENAX R115 MW B, TENAX R120 MW B, TENAX R125 MW B, TENAX R130 MW B,
TENAX R135 MW B, TENAX R140 MW B, TENAX R145 MW B

Year when CE mark was affixed	10									
Essential characteristics	Performance									
Metal facings										
Thickness, mm	0,5; 0,6; 0,7; 0,8									
Steel name	S250GD; S280GD; S320GD									
Organic coating type and thickness	SP25; PVDF35									
Core material										
MW density, kg/m ³	105									
Thermal conductivity, W/m-K	0,042									
Panel										
Thickness, mm	100	105	110	115	120	125	130	135	140	145
Panel weight, kg/m ² (metal thickness 0,5/0,5 mm)	19,4	19,9	20,4	21,0	21,5	22,0	22,5	23,1	23,6	24,1
Shear modules of the core material, MPa	3,0	3,0	3,0	3,0	2,5	2,5	2,5	2,5	2,5	2,5
Shear strength of the panel, MPa	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040
Long term shear strength, MPa	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020
Creep coefficient										
- $t = 2\ 000\ h$	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40
- $t = 100\ 000\ h$	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60
Compressive strength of the core material, MPa	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10
Cross-panel tensile strength, MPa	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07
Wrinkling stress for inner face										
- in span	110	110	110	110	110	110	110	110	110	110
- for loads pressing at an internal support	100	100	100	100	100	100	100	100	100	100
Wrinkling stress for outer face, MPa										
- in span	170	170	170	170	170	170	170	170	170	170
- in span at elevated temperature	170	170	170	170	170	170	170	170	170	170
- for loads suction at an internal support	170	170	170	170	170	170	170	170	170	170
- for loads suction at an internal support at elevated temperature	170	170	170	170	170	170	170	170	170	170
Thermal transmittance, W/m ² -K	0,40	0,38	0,37	0,35	0,34	0,32	0,31	0,30	0,29	0,28
Durability	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours
Resistance to point loads	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Resistance to access loads, kPa	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Reaction to fire	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Fire resistance	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
External fire performance	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)
Water permeability	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Air permeability	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Airborne sound insulation	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD



Declaration of Performance No 1S-R5M0-001, Annex 3

Sandwich panels TE TENAX R150 MW B, TENAX R155 MW B, TENAX R160 MW B, TENAX R165 MW B, TENAX R170 MW B, TENAX R175 MW B, TENAX R180 MW B, TENAX R185 MW B, TENAX R190 MW B, TENAX R195 MW B

Year when CE mark was affixed	10									
Essential characteristics	Performance									
Metal facings										
Thickness, mm	0,5; 0,6; 0,7; 0,8									
Steel name	S250GD; S280GD; S320GD									
Organic coating type and thickness	SP25; PVDF35									
Core material										
MW density, kg/m ³	105									
Thermal conductivity, W/m-K	0,042									
Panel										
Thickness, mm	150	155	160	165	170	175	180	185	190	195
Panel weight, kg/m ² (metal thickness 0,5/0,5 mm)	24,6	25,2	25,7	26,2	26,7	27,3	27,8	28,3	28,8	29,4
Shear modules of the core material, MPa	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5
Shear strength of the panel, MPa	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040
Long term shear strength, MPa	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020
Creep coefficient										
- t = 2 000 h	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40
- t = 100 000 h	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60
Compressive strength of the core material, MPa	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10
Cross-panel tensile strength, MPa	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07
Wrinkling stress for inner face										
- in span	110	110	110	110	110	110	110	110	110	110
- for loads pressing at an internal support	100	100	100	100	100	100	100	100	100	100
Wrinkling stress for outer face, MPa										
- in span	160	160	160	160	160	160	160	160	160	160
- in span at elevated temperature	160	160	160	160	160	160	160	160	160	160
- for loads suction at an internal support	160	160	160	160	160	160	160	160	160	160
- for loads suction at an internal support at elevated temperature	160	160	160	160	160	160	160	160	160	160
Thermal transmittance, W/m ² -K	0,27	0,26	0,26	0,25	0,24	0,23	0,23	0,22	0,22	0,21
Durability	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours
Resistance to point loads	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Resistance to access loads, kPa	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Reaction to fire	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Fire resistance	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
External fire performance	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)
Water permeability	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Air permeability	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Airborne sound insulation	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD

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**Declaration of Performance No 1S-R5M0-001, Annex 4**

Sandwich panels TENAX R200 MW B, TENAX R205 MW B, TENAX R210 MW B,
TENAX R215 MW B, TENAX R220 MW B, TENAX R225 MW B, TENAX R230 MW B,
TENAX R235 MW B, TENAX R240 MW B, TENAX R245 MW B, TENAX R250 MW B

Year when CE mark was affixed	10										
Essential characteristics	Performance										
Metal facings											
Thickness, mm	0,5; 0,6; 0,7; 0,8										
Steel name	S250GD; S280GD; S320GD										
Organic coating type and thickness	SP25; PVDF35										
Core material											
MW density, kg/m ³	105										
Thermal conductivity, W/m·K	0,042										
Panel											
Thickness, mm	200	205	210	215	220	225	230	235	240	245	250
Panel weight, kg/m ² (metal thickness 0,5/0,5 mm)	29,9	30,4	30,9	31,5	32,0	32,5	33,0	33,6	34,1	34,6	35,1
Shear modulus of the core material, MPa	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5
Shear strength of the panel, MPa	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040	0,040
Long term shear strength, MPa	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020	0,020
Creep coefficient											
- t = 2 000 h	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40	0,40
- t = 100 000 h	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60	0,60
Compressive strength of the core material, MPa	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10	0,10
Cross-panel tensile strength, MPa	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07	0,07
Wrinkling stress for inner face											
- in span	110	110	110	110	110	110	110	110	110	110	110
- for loads pressing at an internal support	100	100	100	100	100	100	100	100	100	100	100
Wrinkling stress for outer face, MPa											
- in span	150	150	150	150	150	150	150	150	150	150	150
- in span at elevated temperature	150	150	150	150	150	150	150	150	150	150	150
- for loads suction at an internal support	150	150	150	150	150	150	150	150	150	150	150
- for loads suction at an internal support at elevated temperature	150	150	150	150	150	150	150	150	150	150	150
Thermal transmittance, W/m ² ·K	0,21	0,20	0,20	0,19	0,19	0,18	0,18	0,18	0,17	0,17	0,17
Durability	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours	Pass – all colours
Resistance to point loads	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Resistance to access loads, kPa	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Reaction to fire	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Fire resistance	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
External fire performance	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)	B _{ROOF} (1,12,13)
Water permeability	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Air permeability	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
Airborne sound insulation	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD