ROCKWOOL B.V. / Rockpanel
Konstruktieweg 2
NL-6045 JD Roermond
www.rockpanel.com

DECLARATION OF PERFORMANCE

No. ***0764-CPR-0313 - UK - vs01***

1. Unique identification code of the product-type:

'**Rockpanel Premium A2'**

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11 (4):

Backside print on the board.

3. Intended use / es

Internal and external wall cladding

4. Manufacturer

ROCKWOOL B.V.
Industrieweg 15
NL-6045 JG Roermond, Netherlands
Tel. +31 475 353 53

5. System or systems of AVCP (assessment and verification of constancy of performance of the construction product) as set out in Annex V (amended by : OJ L 157, 27.5.2014, p. 76-79)

System 1 for reaction to fire and system 2+ for other characteristics

6. European Assessment Document:

EAD 090001-01-0404 for Prefabricated compressed mineral wool boards with organic or inorganic finish and with specified fastening system, edition September 2018.

European Technical Assessment: ETA-18/0883 of 2019-09-04

Technical Assessment Body:
ETA-Danmark A/S
Göteburg Plads 1, DK-2150 Nordhavn, Denmark
Tel. +45 72 24 59 00
Fax +45 72 24 59 04
Internet www.etadanmark.dk

Notified Body:
Materialprüfanstalt für das Bauwesen
Nienburger Strasse 3, D-30167 Hannover, Germany
Notified Body 0764
Tel. +49 511 762 3104
Fax +49 511 762 4001
Internet www.mpa-bau.de/

and issued: **Certificate of Constancy of performance No. 0764 - CPR – 0313**

7. Characteristics of the product

The '*Rockpanel Premium A2'* panels are surface treated with a four-layer water-borne polymer emulsion paint on one side, which has been provided with an extra anti-graffiti clear coat as a fifth layer on the colour paint.

The physical properties of '***Rockpanel Premium A2'*** are indicated below:

- Thickness, nominal: 11 mm
- length, max: 3050 mm
- width, max: 1250 mm
- density, nominal: 1250 kg/m³
- bending strength: length and width $f_{05} \geq 25.5$ N/mm²
- Modulus of Elasticity: m(E) ≥ 4740 N/mm²
- Thermal conductivity EN 10456: 0.55 W/(m•K)

Clause 8 contains the performances of '*Rockpanel Premium A2'.*

8. Declared performance

<table>
<tr><td>Essential characteristic</td><td colspan="4">Performance</td><td>Harmonised technical specification</td></tr>
<tr><td rowspan="3">Basic Requirements for construction works
BR2 - Safety in case of fire</td><td colspan="4">Table 1 - Euroclass classification of constructions with ‘Rockpanel Premium A2’ boards</td><td rowspan="3">ETA-18/0883 issued 2019-09-04
EN 13501-1</td></tr>
<tr><td>Fixing method</td><td>Ventilated or non-ventilated</td><td>subframe</td><td>Euroclass</td></tr>
<tr><td>mechanically fixed</td><td>Ventilated with ≥ 20 mm cavity</td><td>vertical aluminum or steel profiles</td><td>A2-s1,d0
open horizontal joint max. 8 mm</td></tr>
</table>

Field of application
The following field of application applies.

Euroclass classification
The classification mentioned in Table 1 is valid for the following end use conditions:

Mounting:
- Mechanically fixed to a metal subframe
- The panels are backed with min. 50 mm mineral wool insulation with density 30-70 kg/m^3 according to EN 13162 with a cavity between the panels and the insulation

Substrates:
- Concrete walls, masonry walls

Insulation:
- Ventilated constructions: The subframe is backed with min. 50 mm mineral wool insulation with density 30-70 kg/m^3 according to EN 13162 with a cavity of minimal 20 mm between the panels and the insulation
- Results are also valid for all greater thickness of mineral wool insulation layer with the same density and the same or better reaction to fire classification
- Results are also valid for the panels without insulation, if the substrate chosen according to EN 13238 is made of panel with Euro-class A1 or A2 (e.g. fibre-cement panels)

Subframe:
- Test results are only valid for a metal subframe

Fixings:
- Results are also valid with higher density of the fixing devices
- Test results are also valid for all the mechanical fixings

Cavity:
- Unfilled
- The depth of the cavity is minimum 20 mm
- Test results are also valid for other higher thickness of air space between the back of the board and the insulation behind the subframe

Joints:
- Vertical joints are without a gasket backing and horizontal joints can be open or closed with an aluminum profile
- The result from a test with an open horizontal joint is also valid for the same type of panel used in applications with horizontal joints closed by steel or aluminum profiles
- Max joint width: 8 mm

The classification is also valid for the following product parameters:

Thickness: • Nominal 11 mm

Density: • Nominal 1250 kg/m^3

Essential characteristic	***Table 2*** *- Performance - Water vapour permeability and water permeability*		*Harmonised technical specification*
	Property	*Declared values*	
BR3 – Hygiene, health and environment	Water vapour permeability	NPD No Performance Declared	ETA-18/0883 issued 2019-09-04
	Water permeability	NPD No Performance Declared	ETA-18/0883 issued 2019-09-04

Essential characteristic	***Table 3*** *- Performance - Release of dangerous substances*		*Harmonised technical specification*
	Property	*Product specification*	
BR3 – Hygiene, health and environment	Dangerous substances	The kit does not contain/release dangerous substances specified in TR 034, dated April 2013*), except Formaldehyde concentration 0.0105 mg/ m^3. Formaldehyde class E1 The used fibres are not potential carcinogenic No biocides are used in the Rockpanel boards No flame retardant is used in the boards No cadmium is used in the boards.	ETA-18/0883 issued 2019-09-04

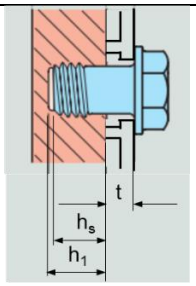
*) In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

Essential characteristic	***Table 4*** *- Performance - Design value of the axial load for mechanical fixing 'Rockpanel Premium A2' boards*						*Harmonised technical specification*	
BR4 – Safety in use	*For hole diameters fixings see Table 5*							
	Property		Span in mm		$X_d = X_k / \gamma_M$ in N Middle / Edge / Corner		*Table in ETA*	
	Design value of the axial load X_d	**Rivet** fixing [b1]	a fixing	b board	750 [a1]	750 [a1]	614 / 394 / 398 [c]	13a	ETA-18/0883 issued 2019-09-04
		TU-S blind fasteners [b2]	a rails	b hangers	$X_d = \eta * (X_k / \gamma_m)$ in N Middle / Edge / Corner			
			600 [a2]	750 [a2]	346 / 391 / 191 [c]		13b	

[a1] see Table 6a & 6b; [a2] see Table 6c; [b1] for specifications fixings see Table 8a; [b2] for specifications fixings see Table 8b
[c] The following material factors have been used: for the Premium A2 $\gamma_M = 2.0$; $\gamma_m = 1.6$*; for the connection rivet-subframe* γ_M = 1.25; *conversion factor* η *location middle:* 0.615, *location edge:* 0.614 *and location corner:* 0.509

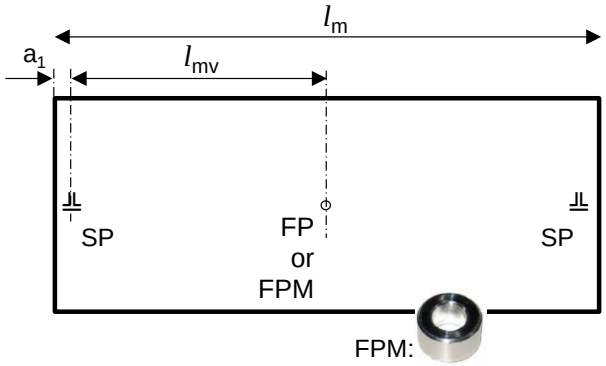
Essential characteristic	***Table 5a*** *- Performance mechanical fixings : hole diameters for 'Rockpanel Premium A2' boards*				*Harmonised technical specification*
	Fixing type [a]	Fixed hole	Moving hole	Slotted hole	
BR4 – Safety in use	Rivet	5.1	8.0	5.1 * 8.0	ETA-18/0883 issued 2019-09-04

[a] for specifications fixings see Table 8a; for installation methods see table 6a and 6b

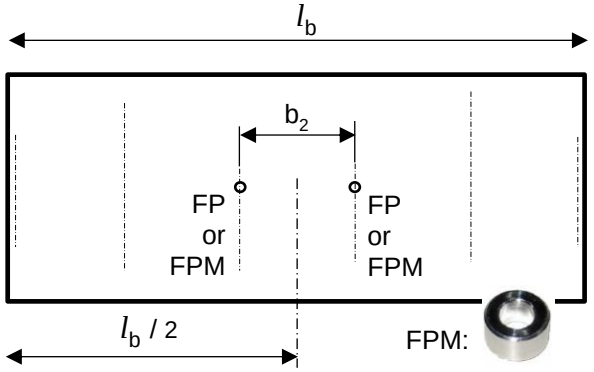
Essential characteristic	***Table 5b*** *- Performance mechanical fixings : hole diameters for 'Rockpanel Premium A2' boards*			*Harmonised technical specification*
			Fixing type *[a]*	
		anchor	TU-S 6x13	TU-S 6x11
BR4 – Safety in use		t [mm]	5	3
		h_s [mm]	8,0	8,0
		h_1 [mm]	8,5 +0,1/-0,1	
		hole diameter mm	6,0 ; tolerances +0/-0,1	

[a] for specifications anchors see Table 8b; for installation see table 6c

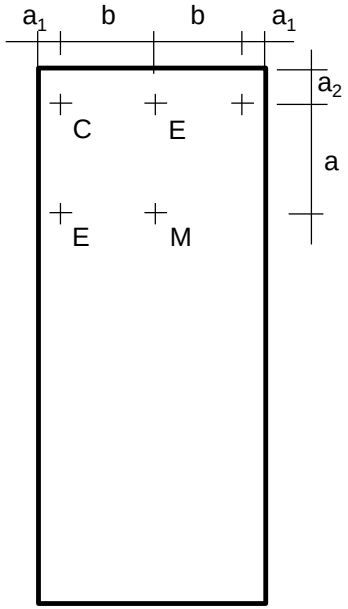
Essential characteristic	***Table 6a***	*Performance rivet fixing according to table 4 and 5a with the required edge distances, maximum distances and horizontal installation of boards*	*Harmonised technical specification*
BR4 – Safety in use			ETA-18/0883 issued 2019-09-04 Table 10, 11, 12a and Fig. 2



FP/SP [b]	'Fixed point' FP and 'slotted point' SP (according to Table 5a) in the middle of the vertical part of the board
All the other fixing points are 'moving points'	
l_m	length max 3050 mm
l_{mv}	'moving length' ≤ 1510 mm



l_b	Length of the board
b_2	max. 750 mm; b_2 in the central area of the board length l_b
FPM [b]	Creating a fixed point by the use of a sleeve FPM



Location oft he fixing
M: middle of the board
E: edge of the board
C: corner of the board

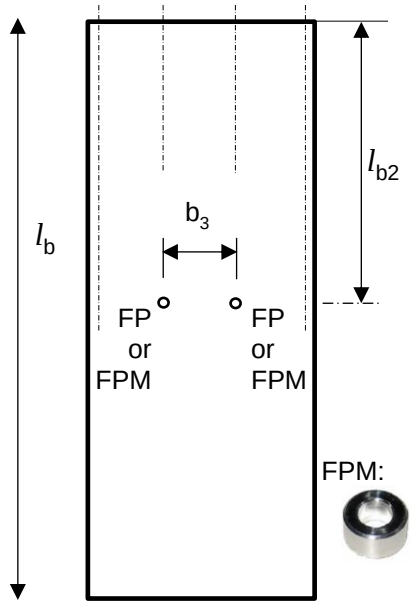
Fixing type	b_{max}	a_{max}	a_1	a_2
Rivet [a]	750	750	≥ 20	≥ 50

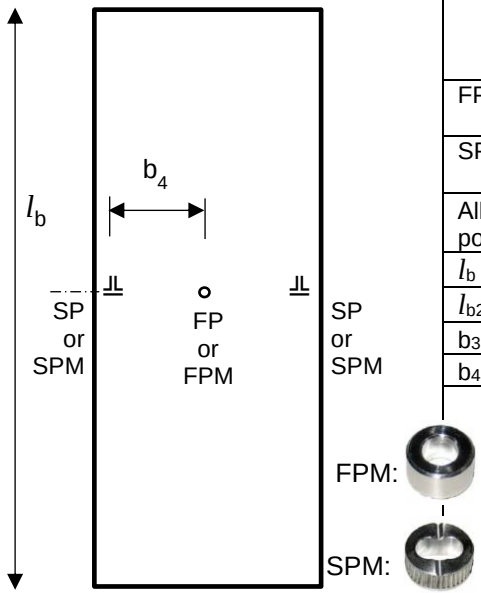
		Drill hole according to Table 5	Sleeve
Subframe Aluminum :	FPM – Sleeve [a] [b]	8 mm	ø8 x 7.5 – drill hole ø5.1
	FP - 'Fixed point' FP (according to Table 5) in the central area of the vertical edge of the board		

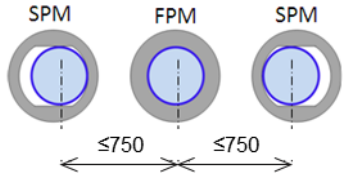
[a]: For correct fixing (FP and FPM) a riveting tool with rivet spacer must be used (e.g. 0.3 mm).
[b]: Subframe aluminum

Essential characteristic	***Table 6b***	*Performance rivet fixing according to Table 4 and 5a with the required edge distances, maximum distances and vertical installation of boards*	*Harmonised technical specification*

BR4 – Safety in use





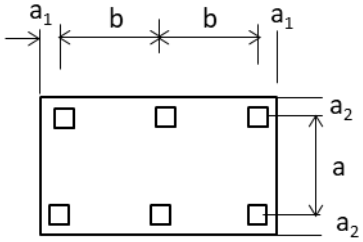
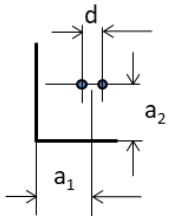


FP/SP [b]	'Fixed points' FP and 'slotted points' SP (according to Table 5a) in the middle of the vertical part of the board
FPM [b]	Fixed point realized by a sleeve FPM
SPM [b]	Slotted hole realized by a side sleeve
All the other fixing points are 'moving' points	
l_b	Length of the board
l_{b2}	ca l_b / 2
b_3	max. 400 mm
b_4	max. 600 mm

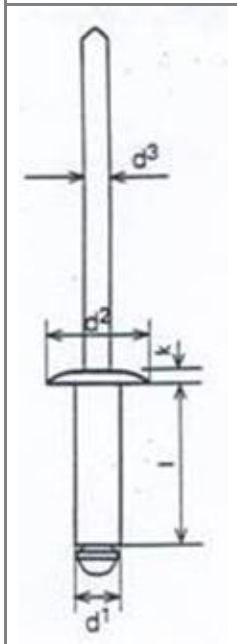
ETA-18/0883 issued 2019-09-04 Table 10, 11, 12a and Fig. 2

		Drill hole according to Table 6	Sleeve
Subframe Aluminum :	FPM – Sleeve [a] [b]	8 mm	ø8 x 7.5 – hole ø5.1
	SPM – Side sleeve [a] [b]	8 mm	ø8 x 7.5 – hole ø5.1 x 6.2

[a]: For correct fixing (FP, FPM, SP and SPM) a riveting tool with rivet spacer must be used (e.g. 0.3 mm). [b]: Subframe aluminium

Essential characteristic	***Table 6c*** - TU-S undercut anchors - *Minimum edge distances and maximum distances between anchors in mm*							*Harmonised technical specification*
	layout panel with clips	location in corner	secret fixing clip b_{max}	rails a_{max}	a_1	a_2	d	
BR4 –Safety in use			750	600	≥ 80	≥ 80	30	ETA-18/0883 issued 2019-09-04 Table 12a

Essential characteristic	***Table 7*** *– Performance shear strength mechanical fixings*				*Harmonised technical specification*
		Fixing	Failure load	Deformation	
BR4 – Safety in use	Characteristic shear strength average values	Rivets	2194 N	4.4 mm	ETA-18/0883 issued 2019-09-04
		TU-S anchors	3279 N (2 anchors in 1 secret fixing clip)	2.5 mm	

Table 8a - *Specifications mechanical fixings - Rivet aluminum or stainless steel [e]*						*Harmonised technical specification*
		Aluminum [d]	Stainless steel A4 [a]	Aluminum [d]	stainless steel [b]	
	Code	AP14-50210-S	SSO-D15-50180	1290407	1290806	
	Body	aluminum EN AW-5019 (AlMg5) in accordance with EN 755-2	stainless steel material number 1.4578 in accordance with EN 10088	aluminum EN AW-5019 (AlMg5) in accordance with EN 755-2	stainless steel material number 1.4567 in accordance with EN 10088	
	Mandrel	stainless steel material number 1.4541 in accordance with EN 10088	stainless steel material number 1.4541 in accordance with EN 10088	stainless steel material number 1.4541 in accordance with EN 10088	stainless steel material number 1.4541 in accordance with EN 10088	ETA-18/0883 issued 2019-09-04 Table 5a
	Pull-out strength	$F_{mean,n}$ = 2038	$F_{mean,n}$ = 1428	$F_{mean,10}$ = 2318	$F_{mean,10}$ = 3212	
		s = 95	s = 54	s = 85	s = 83	
		$F_{u,5}$ = 1882	$F_{u,5}$ = 1339	$F_{u,5}$ = 2155	$F_{u,5}$ = 3052	
	d^1	5	5	5	5	
	d^2	14	15	14	14	
	d^3	2.7	2.7	2.7	2.95	
	l	21	18	21	16	
	k	1.5	1.5	1.5	1.5	
	profile	aluminum t ≥ 1.5 mm	steel t ≥ 1.0 mm [a]	aluminum t ≥ 1.8 mm	steel t ≥ 1.5 mm [b]	

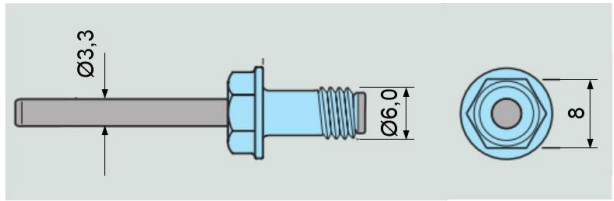
[a] : The minimum thickness of the vertical steel profiles is 1.0 mm. The steel quality is S320GD +Z EN 10346 number 1.0250 (or equivalent for cold forming).
For minimum coating thickness see [c]

[b] : The minimum thickness of the vertical steel profiles is 1.5 mm. The steel quality is EN 10025-2:2004 S235JR number 1.0038. For minimum coating thickness see [c]

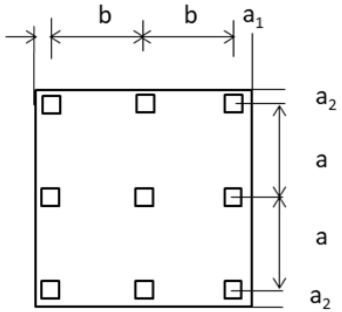
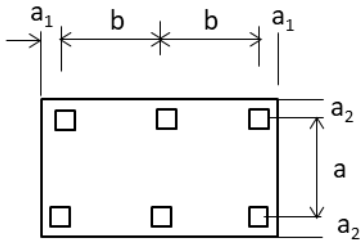
[c] : The minimum coating thickness (Z or ZA) is determined by the corrosion rate (amount of corrosion loss in thickness per year) which depends on the specific outdoor atmospheric environment (the Zinc Life Time Predictor can be used to calculate the Corrosion Rate in μm /y for a Z coating: http://www.galvinfo.com:8080/zclp/ (copyright The International Zinc association).
The coating designation (classification which determines the coating mass) shall be agreed between the contractor and the building owner.
Alternatively a hot dip galvanized coating according to EN ISO 1461 can be used.

[d] : The aluminum is AW-6060 according to EN 755-2.The $R_m/R_{p0,2}$ value is 170/140 for profile T6 and 195/150 for profile T66.

[e] : For correct fixing a riveting tool with rivet spacer must be used (e.g. 0.3 mm)

Table 8b *- Specifications mechanical fixings – blind fastener*			
	manufacturer	SFS intec	*Harmonised technical specification*
	code	TU-S 6x13 [a] or TU-S-6x11 [b]	ETA-18/0883 issued 2019-09-04 Table 5b
	body	stainless steel material number 1.4401 in accordance with EN 10088	
	mandrel	electro-galvanised carbon steel	
[a]: thickness secret fixing clip (Table 5b): t = 5 mm; [b]: thickness secret fixing clip (Table 5b): t = 3 mm			

Essential characteristic	***Table 9a*** *– Performance Impact resistance 'Rockpanel Premium A2' with rivet fixing*				*Harmonised technical specification*
	Impactor	Energy	Category	Table in ETA	
BR4 – Safety in use	Hard body	1 J	IV	6a	ETA-18/0883 issued 2019-09-04 Table 6a
	Hard body	3 J	III, II and I		
	Hard body	10 J	II and I		
	Soft body	10 J	IV and III		

Essential characteristic	***Table 9b*** *– Performance Impact resistance 'Rockpanel Premium A2' with concealed anchoring system*						Table in ETA	*Harmonised technical specification*
BR4 – Safety in use							6b	ETA-18/0883 issued 2019-09-04 table 6b
		a_1/a_2	80/80	80/80	80/80	80/80		
		b	750	520	750	520		
	Impactor	a	520	600	600	600		
	Hard body	Energy 3 j and 10 J	*Impact Category* I					
	Soft body	60 J and 300 J	*Impact Category* I					
	Soft body	400 J	*Impact Cat.* I	fail	*Impact Cat.* I	*Impact Cat.* I		

Essential characteristic	***Table 10** – Performance dimensional stability 'Rockpanel Premium A2'*				*Harmonised technical specification*
		Length	Width	Table in ETA	
BR4 – Safety in use	Deformation - cumulative dimensional change [a]	0.061%	0,064%	7	ETA-18/0883 issued 2019-09-04
	Dry heat 23°C / 50% to 23°C / 0% (mm/m)	-0.240	-0.290		
	Coefficient of thermal expansion (10^{-6} K^{-1})	9.7	9.7		
	Coefficient of moisture expansion 42% RH difference after 4 days (mm/m)	0.204	0,207		

[a] As a consequence the minimum joint width shall be 3 mm, preferably 5 mm.

Essential characteristic	***Table 11** – Resistance to hygro-thermal cycles and Xenon Arc exposure 'Rockpanel Premium A2'*	*Harmonised technical specification*
	Performance	
Aspects of durability and serviceability	Resistance to Hygrothermal cycles	Pass	ETA-18/0883 issued 2019-09-04
	Resistance to Xenon Arc exposure *EOTA TR010 climate class S (Technical Report 010)* 5000 hours artificial weathering	ISO 105 A02: 4 or better	

9. *The performances 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.*

Signed for and on behalf of the manufacturer by:

ROCKWOOL B.V.
W.J.E. Dumoulin
Technical Director Operations
DE-NL

At Roermond, The Netherlands on 2020-06-04

DOP in accordance with **Commission Delegated Regulation (EU) No 574/2014 of 21 February 2014 amending Annex III to Regulation (EU) No 305/2011 of the European Parliament and of the Council on the model to be used for drawing up a declaration of performance on construction products**, *http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014R0574, OJ L 159, 28.5.2014, p. 41-46*