

DECLARATION OF PERFORMANCE

No. **0764-CPD-0195_JHg13-040 vs01 - UK**

1. *Unique identification code of the product-type:*

ROCKPANEL FS-Xtra 9 mm finish Colours/Rockclad and ROCKPANEL FS-Xtra 9 mm finish ProtectPlus

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

EC-Certificate of Conformity 0764 - CPD – 0195

3. *Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:*

Internal and external wall and ceiling finishes

4. *Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):*

ROCKWOOL B.V. / ROCKPANEL Group
Konstruktieweg 2
NL-6045 JD Roermond
Tel. +31 475 353 000
Fax +31 475 353 550

5. *Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):*

Not relevant

6. *System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:*

System 1

7. *In case of the declaration of performance concerning a construction product covered by a harmonised standard:*

Not relevant

8. *In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:*

ETA-Danmark A/S
Kollegievej 6, DK-2920 Charlottenlund
Tel. +45 72 24 59 00
Fax +45 72 24 59 04
Internet www.etadanmark.dk E-mail: eta@etadanmark.dk

<i>issued</i>	ETA-13/0340 valid from 2013-05-30 to 2018-05-30
<i>on the basis of</i>	CUAP 04.04/12 update 2008-06-25
<i>Notified Body</i>	Materialprüfanstalt für das Bauwesen Nienburger Strasse 3, D-30167 Hannover Notified Body 0764 Tel. +49 511 762 3104 Fax +49 511 762 4001 Internet www.mpa-bau.de/
<i>performed</i>	(i) type testing, (ii) initial inspection of the manufacturing plant and of factory production control, (iii) continuous surveillance assessment and evaluation of factory production control
<i>under system</i>	1
<i>and issued</i>	EC-Certificate of Conformity 0764 - CPD – 0195

Characteristics of the product

The ROCKPANEL FS-Xtra Colours/Rockclad panels are surface treated with a four-layer water-borne polymer emulsion paint on one side, in a range of colours.

The ROCKPANEL FS-Xtra ProtectPlus 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 FS-Xtra** 9 mm are indicated below:

- thickness and tolerances	9 ± 0.5 mm
- length, max	3050 mm
- width, max	1250 mm
- density, nominal and tolerances	1250 ± 100 kg/m ³
- bending strength	length and width $f_{05} \geq 25.5$ N/mm ²
- Modulus of Elasticity	$m(E) = 4740$ N/mm ²
- Thermal conductivity EN 10456	0.55 W/(m·K)

Clause 9 contains the performances of ROCKPANEL FS-Xtra 9 mm.

9. Declared performance

Essential characteristics	Performance				Harmonised technical specification
ER2 - Safety in case of fire	Table 1 - Euroclass classification of constructions with ROCKPANEL FS-Xtra boards				ETA-13/0340 issued 2013-05-30 EN 13501-1:2010
	Fixing method	Ventilated or non-ventilated	subframe	Euroclass	
	mechanically fixed	Ventilated with 60 mm cavity	vertical aluminium or steel profiles	A2-s1,d0 open 8 mm horizontal joint	

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 51-69 kg/m³ with an air gap 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 51-69 kg/m³ with an air gap of min. 60 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 Euroclass 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 the same type of panel fixed by rivets made of the same material of screws and vice versa
- Cavity:
 - Unfilled
 - The depth of the cavity is minimum 60 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 aluminium 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 aluminium profiles

The classification is also valid for the following product parameters:

- Thickness:
 - Nominal 9 mm, individual tolerances ± 0.5 mm
- Density:
 - Nominal 1250 kg/m³, individual tolerances ± 100 kg/m³

Essential characteristics	Table 2 - Performance - Water vapour permeability and water permeability		Harmonised technical specification
	Property	Declared values	
ER3 – Hygiene, health and environment	Water vapour permeability	NPD No Performance Declared	ETA-13/0340 issued 2013-05-30
	Water permeability	NPD No Performance Declared	ETA-13/0340 issued 2013-05-30

Essential characteristics	Table 3 - Performance - Release of dangerous substances		Harmonised technical specification
	Property	Product specification	
ER3 – Hygiene, health and environment	Influence on air quality and Release of dangerous substances to soil and water	No dangerous materials to soil and water *) 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. Formaldehyde concentration <0,01 mg/m ³ Formaldehyde class E1	ETA-13/0340 issued 2013-05-30

*) In accordance with http://ec.europa.eu/enterprise/sectors/construction/cp-ds/index_en.htm In addition to the specific clauses relating to dangerous substances contained in ETA-13/0340, 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 EU Construction Products Directive, 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 9 mm 'FS-Xtra' boards					Harmonised technical specification			
	For hole diameters fixings see Table 5								
	Property	9 mm boards	Span in mm [a]		$X_d = X_k / \gamma_M$ in N Middle / Edge / Corner	Table in ETA			
ER4 – Safety in use	Design value of the axial load $X_d = X_k / \gamma_M$ [c]	Rivet fixing [b]	a fixing	b board				600	600

[a] see Table 6

[b] for specifications fixings see Table 8

[c] The following material factors have been used: for the FS-Xtra $\gamma_M = 2,0$; for the connection rivet-subframe $\gamma_M = 1,25$

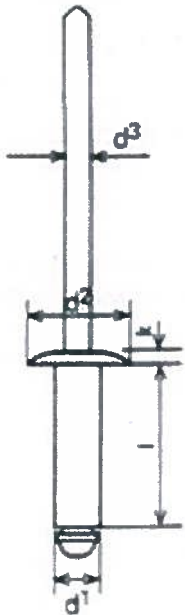
Essential characteristic	Table 5 – Performance mechanical fixings : hole diameters for 'FS-Xtra' boards				Harmonised technical specification
	Fixing type [a]	Fixed hole	Moving hole	Slotted hole	
ER4 – Safety in use	Rivet	5.1	8.0	5.1 * 8,0	ETA-13/0340 issued 2013-05-30

[a] for specifications fixings see Table 8

Essential characteristic	Table 6 – Performance fixings according to table 4 and 5 with the required edge distances, maximum distances and fixing method					Harmonised technical specification	
ER4 – Safety in use	<p>Length max 3050 mm 'moving length' ≤ 1510 mm</p> <p>fixed hole FP and slotted holes SP in the middle of the vertical part of the board</p>				<p>M: Fixing in intermediate position E: Edge fixing C: Corner fixing</p> <p><i>Remark</i> Rivet fixing only with a riveting tool with rivet spacer (for instance 0.3 mm)</p>		ETA-13/0340 issued 2013-05-30
	Fixing type	b_{max}	a_{max}	a_1	a_2		
	Rivet	600	600	≥ 20	≥ 50		

Essential characteristic	Table 7 – Performance shear strength mechanical fixings			Harmonised technical specification
	Fixing	Failure load	Deformation	
ER4 – Safety in use	Characteristic shear strength Average values	Rivets 2390 N	3.2 mm	ETA-13/0340 issued 2013-05-30

Table 8 - Specifications mechanical fixings - Rivet aluminium or stainless steel

		Aluminium [d]	Stainless steel A4 [a]	Aluminium [d]	stainless steel [b]	Harmonised technical specification
	Code	AP14-50180-S	SSO-D15-50180	1290406	1290806	
Body	aluminium EN AW-5019 (AlMg5) in accordance with EN 755-2	stainless steel material number 1.4578 in accordance with EN 10088	aluminium 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-13/0340 issued 2013-05-30
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	18	18	18	16		
k	1.5	1.5	1.5	1.5		
profile	aluminium $t \geq 1.5$ mm	steel $t \geq 1.0$ mm [a]	aluminium $t \geq 1.8$ mm	steel $t \geq 1.5$ 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 μ m /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 aluminium 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.

Essential characteristic	Table 9 – Performance Impact resistance				Harmonised technical specification	
	Impactor		Energy	Category		Table in ETA
ER4 – Safety in use	Hard body	Steel ball 0.5 kg	1 J	IV	6	ETA-13/0340 issued 2013-05-30
	Hard body	Steel ball 0.5 kg	3 J	III, II and I		
	Hard body	Steel ball 1 kg	10 J	II and I		
	Soft body	Ball 3 kg	10 J	IV and III		

Essential characteristic	Table 10 – Performance dimensional stability			Harmonised technical specification	
		Length	Width		Table in ETA
ER4 – Safety in use	Deformation - cumulative dimensional change [a]	0.061%	0.066%	7	ETA-13/0340 issued 2013-05-30
	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		Harmonised technical specification	
		Performance		
Aspects of durability and serviceability	Resistance to Hygrothermal cycles	Pass	ETA-13/0340 issued 2013-05-30	
	Resistance to Xenon Arc exposure 5000 hours artificial weathering (TR010 climate class S)	Finish 'Colours/Rockclad'		ISO 105 A02: 3-4 or better
		Finish 'ProtecPlus'		ISO 105 A02: 4 or better

10. *The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.*

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

ROCKWOOL B.V.
Maurice Husson - Technical Director DE-NL
(name and function)

Roermond, The Netherlands
21st June 2013

(place and date of issue)



(signature)

DOP in accordance with EN L 88/38 Official Journal of the European Union 4.4.2011 / ANNEX III