



Product Data Sheet ROCKPANEL® Brilliant

Durable - Xtreme - FS-Xtra

United Kingdom



Product description

ROCKPANEL boards are prefabricated compressed mineral wool boards with synthetic binders. The surface of ROCKPANEL Brilliant is treated with a four-layer water-borne polymer emulsion paint on one side, and comes standard with a ProtectPlus finish. The ROCKPANEL ProtectPlus boards are provided with an extra anti-graffiti clear coat as a fifth layer on top of the coloured paint.

Intended use

The ROCKPANEL boards are suitable as façade cladding, fascias and soffits, infill boards and external ceilings. The boards can be fastened to timber or metal sub-frames. Fastening to the timber sub frame is carried out with corrosion resistant nails or screws or by bonding. Fastening to a metal sub frame is carried out with corrosion resistant rivets or by bonding. Mechanical fasteners, gaskets, adhesives with primers, strips for bonding and aluminium profiles are specified by the ROCKPANEL Group.

Dimensions and weight

Property	Durable	Xtreme	FS-Xtra
Panel dimensions (mm)	3050	3050	3050
Panel width (mm)	1200	1200	1200
Panel thickness (mm)	8	8	9
Weight	8 mm: 8.4 kg/m ²	9.6 kg/m ²	11.25 kg/m ²
Density	1050 kg/m ³	1200 kg/m ³	1250 kg/m ³
Length/width tolerance (mm)	+2/-2	+2/-2	+2/-2
Thickness tolerance (mm)	8 mm: +0.5 mm / -0.5 mm	+0.5/-0.5	+0.5/-0.5
Weight tolerance	8 mm: -1.65 / +1.80 kg/m ²	-1.35 / +1.45 kg/m ²	-1.47 / +1.58 kg/m ²
Density tolerance	±150 kg/m ³	±100 kg/m ³	±100 kg/m ³

Colour fastness

The colour fastness of the panels after 5000 hours artificial weathering according to EOTA technical report no. 10 is indicated in next table:

	Value (ISO 105 A02)
ROCKPANEL Brilliant	4 or better

Suitable sub-frames

ROCKPANEL Brilliant in Durable and X-treme quality can be attached to the building by fixing to a sub-frame of wood or metal. ROCKPANEL Brilliant in FS-Xtra quality can only be attached to a sub-frame of aluminium or steel. The vertical wooden battens should have a minimum thickness of 28 mm. The minimum thickness of the vertical aluminium profiles is 1.5 mm. The aluminium is AW-6060 according to EN 755-2. The Rm/Rp0.2 value is 170/140 for profile T6 and 195/150 for profile T66. The minimum thickness of the vertical steel profiles is either 1.0 mm (steel quality is S320GD +Z EN 10346 number 1.0250, or equivalent for cold forming), or 1.5 mm (steel quality EN 10025-2:2004 S235JR number 1.0038).

Physical properties*

Property	Durable	Xtreme	FS-Xtra
Thermal conductivity	0.35 W/m·K	0.51 W/m·K	0.55 W/m·K
Water vapour permeability 23 °C and 85% RH (S _d)	< 3.5 m	< 3.5 m	n.a.
Coefficient of thermal expansion (α)	11x10 ⁻³ mm/m·K	13x10 ⁻³ mm/m·K	9.7x10 ⁻³ mm/m·K
Coefficient of moisture expansion 23 °C/50% RH to 95% RH [after 4 days]	0.310 mm/m	0.29 mm/m	0.206 mm/m

* Tests are executed according to the European test guideline for ROCKPANEL. CUAP 04.04/12

Impact Resistance*

Impact test	Durable	Xtreme	FX-Xtra
Hard body impact-steel ball (1J)			Cat. IV
Hard body impact-steel ball (3J)	Cat. III, II and I	Cat. III, II and I	Cat. III, II and I
Hard body impact-steel ball (10J)			Cat. II and I
Soft body (10J)	Cat. IV and III	Cat. IV and III	Cat. IV and III
Soft body (300J)	Cat. II	Cat. II	

* Tests are executed according to the European test guideline for ROCKPANEL. CUAP 04.04/12

Properties in relation to fire

The ROCKPANEL Brilliant panels have been classified in accordance with EN 13501-1 with the following parameters:

Product Grade	Fixing Method	Ventilated or non-ventilated**	Vertical wooden sub frame*
Durable & Xtreme	Mechanically fixed	Non-ventilated cavity filled with mineral wool**	B-s1,d0 closed horizontal joint
		Ventilated with EPDM gasket on the battens	B-s2,d0 open 6 mm horizontal joint
		Ventilated with 6 or 8 mm ROCKPANEL strips on the battens	B-s2,d0 open 6 mm horizontal joint
Durable & Xtreme	Bonded	Ventilated with 8 mm ROCKPANEL strips on the battens	B-s2,d0 open 6 mm horizontal joint

Product Grade	Fixing Method	Ventilated	Vertical aluminium or steel sub frame*
Durable & Xtreme	Mechanically fixed	Ventilated	B-s2,d0 open 6 mm horizontal joint
	Bonded	Ventilated	B-s2,d0 open 6 mm horizontal joint
FS-Xtra	Mechanically fixed	Ventilated with 60 mm cavity	A2-s1,d0 open 8 mm horizontal joint

* For a complete overview and description of the end use situation in which the classification is determined, please consult the relevant European Technical Approval, see also 'Certification'.

** Check the pre-conditions for non-ventilated constructions or consult ROCKPANEL Group.

Fixings specified for use with ROCKPANEL Durable and Xtreme

Sub-frame ^[2]	Timber		Aluminium*
Type	Ring shank nail	Torx screw	Rivet ^[1]
Material	stainless steel material number 1.4401 or 1.4578 according EN 10088		material EN AW-5019 (AlMg5) in accordance with EN 755-2
Length	32 mm	35 mm	18 mm
Shank diameter	2.7–2.9 mm	3.3–4.5 mm	5 mm
Head diameter	6.0 mm	9.6 mm	14 mm
Hole Ø fixed point	2.5 mm	3.2 mm	5.2 mm
Hole Ø moving point	3.8 mm	6.0 mm	8.0 mm

[1] For correct fixing, use riveting tool with rivet spacer

[2] In accordance with paragraph Suitable sub-frames

* Only for 8 mm boards

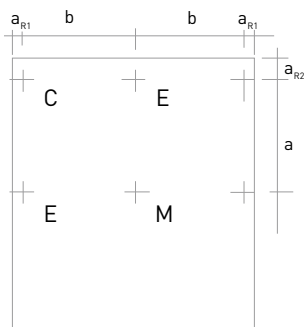
Fixings specified for use with ROCKPANEL FS-Xtra

Thickness profiles subconstruction ^[2]	Rivet ^[1] (for aluminium support)		Rivet ^[1] (for steel support)	
	aluminium ≥ 1.5 mm	aluminium ≥ 1.8 mm	steel ≥ 1.0 mm	steel ≥ 1.5 mm
Code	AP14-50180-S	1290406	SSO-D15-50180	1290806
Material body	material EN AW-5019 (AlMg5) in accordance with EN 755-2	material EN AW-5019 (AlMg5) in accordance with EN 755-2	Stainless steel material number 1.4578 in accordance with EN 10088	Stainless steel material number 1.4567 in accordance with EN 10088
Length	18 mm	18 mm	18 mm	16 mm
Shank diameter	5 mm	5 mm	5 mm	5 mm
Head diameter	14 mm	14 mm	15 mm	14 mm
Hole Ø fixed point	5.1 mm	5.1 mm	5.1 mm	5.1 mm
Hole Ø slotted point	5.1 x 8.0 mm	5.1 x 8.0 mm	5.1 x 8.0 mm	5.1 x 8.0 mm
Hole Ø moving point	8.0 mm	8.0 mm	8.0 mm	8.0 mm

[1] For correct fixing, use riveting tool with rivet spacer

[2] In accordance with paragraph Suitable sub-frames

Mechanical properties



- C: Fixing in corner a_{R1} : boards ≤ 8 mm: 15 mm
 E: Fixing at edge boards ≥ 9 mm: 20 mm
 M: Fixing at intermediate position a_{R2} : 50 mm

Property	Durable*	Xtreme*	FS-Xtra*
Bending strength, length and width ($f_{0,5}$)	≥ 27 N/mm ²	≥ 34.5 N/mm ²	≥ 25.5 N/mm ²
Modulus of elasticity m(E)	4015 N/mm ²	5260 N/mm ²	4740 N/mm ²

* In accordance with standard EN 310

Design value of the axial load $X_d = X_k / \gamma_m$ in the UK*

Product Grade		b max.	a max.	middle (M)	edge (E)	corner (C)
Durable & Xtreme 8 mm	Nail	600 mm	400 mm	142 N**	142 N**	142 N**
Durable & Xtreme 8 mm	Screw	600 mm	600 mm	533 N	241 N	118 N
Durable & Xtreme 8 mm	Rivet	600 mm	600 mm	654 N	309 N	156 N
FS-Xtra	Rivet	600 mm	600 mm	468 N	304 N	200 N

* Assuming façade application in which the timber battens are exposed to climate class 2 in accordance with EN 1995-1-1.

**By using timber battens with strength class C24 in accordance with EN 338 a higher design value for the axial load can be achieved. Contact ROCKPANEL Group for more advice.

Sustainability and environment

ROCKPANEL Brilliant in a Durable grade is independently certified for his environmental performance by the Building Research Establishment (BRE), complying with all requirements identified in the scheme document SD028. BRE granted ROCKPANEL an Environmental Product Declaration (Environmental Profiles Certificate No. 427) acknowledging ROCKPANEL Durable Brilliant board material as amongst the best in his category with A+ and A ratings for various structures.

The influence on air quality and release of dangerous substances to soil and water has been determined to achieve the European Technical Approval.

The analysis showed ROCKPANEL boards contain no dangerous materials such as biocides; the manufacture of ROCKPANEL boards does not involve the use of flame retardents or cadmium.

The formaldehyde concentration is ≤ 0.0105 mg/m³ which relates to formaldehyde class E1.

Visual appearance

Surface quality: ROCKPANEL boards are produced with the utmost care and individually checked before being approved. In the event of doubts the panels are judged visually for aesthetic flaws, in daylight, without sight enhancements, from a distance of at least 5 metres in front of the surface of the façade element, with an observation angle of 45° (horizontally/vertically). This method of judgement does not apply to colour and gloss level.

Batches: ROCKPANEL boards are produced using incoming inspection, process assurance and quality control. For ROCKPANEL Brilliant the whole order for a given project must be ordered as a single batch.

Packaging, storage and transportation

The panels are provided with a protective film on the decorative face and are delivered on pallets and with a protective cover and edge protection. The panels must be stored on a dry sub-soil and protected against rain, preferably under cover. Pallets shall be stacked no more than two pallets high. The panels should be raised when being machined. The panels should not be slid over one another. Protective foam membranes should be placed between the sheets again to protect the surface layer, for example when the panels are stacked after having been sawn.

Maintenance

Depending on the surface treatment, the boards can be cleaned with ordinary cleaning agents such as car shampoo dissolved in lukewarm water. Organic solvents for boards with the ProtectPlus finish are in general also allowed (such as white spirit and acetone), however consult the ROCKPANEL Group for the correct application method. To remove graffiti, ROCKPANEL Group can supply a special cleaner.

Certification

- European Technical Approval ETA-07/0141: ROCKPANEL Durable 8 mm finish Brilliant and ROCKPANEL Durable 8 mm finish ProtectPlus.
- European Technical Approval ETA-12/0054: ROCKPANEL Xtreme 8 mm finish Brilliant and ROCKPANEL Xtreme 8 mm finish ProtectPlus.
- European Technical Approval ETA-13/0340: ROCKPANEL FS-Xtra 9 mm finish Brilliant and ROCKPANEL FS-Xtra 9 mm finish ProtectPlus.

Declarations of Performance (DoP)

- 0764-CPD-0181: ROCKPANEL Xtreme 8 mm finish Brilliant and ROCKPANEL Xtreme 8 mm finish ProtectPlus
- 0764-CPD-0182: ROCKPANEL Durable 8 mm finish Brilliant and ROCKPANEL Durable 8 mm finish ProtectPlus
- 0764-CPD-0195: ROCKPANEL FS-Xtra 9 mm finish Brilliant and ROCKPANEL FS-Xtra 9 mm finish ProtectPlus

Additional information

The product data sheet ROCKPANEL Brilliant clearly specifies the general product properties and is not related to national building regulations. Relevant information about the application of ROCKPANEL boards related to national building regulations or national guidelines can be found in the ROCKPANEL instruction guide and on the ROCKPANEL website. The ROCKPANEL instruction guide and the website also provide fixing tables related to national annex of the EN 1991-1-4.

Also visit www.rockpanel.co.uk for additional information on ROCKPANEL board material, such as a complete overview of the ROCKPANEL assortment, guidelines for processing and installation, safety and health and application.

Published March 2015. This publication supersedes and replaces all previous datasheets. Subject to alterations. All data are intended to serve as general information about our products and their possible uses. This publication is an extract of the European Technical Approval, which is the only legally binding document. ROCKWOOL B.V / ROCKPANEL Group disclaims any liability towards possible (typing) errors and incomplete information in this product data sheet. No rights may be derived from the content of this publication.

www.rockpanel.co.uk

