Product Data Sheet ROCKPANEL® Lines²

United Kingdom

Rockpanel®
a ROCKWOOL company

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Product description

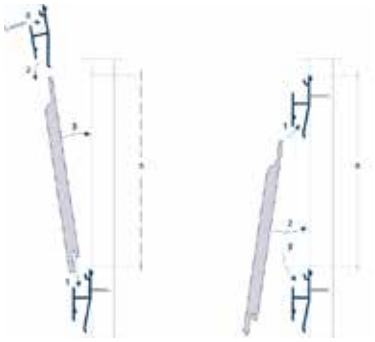
ROCKPANEL® Lines² tongue and groove panels are made from prefabricated compressed mineral wool boards with thermo-setting synthetic binders. The surface of ROCKPANEL Lines² is treated with a two-layer water-borne polymer emulsion paint on one side, in a range of colours.

Intended use

The ROCKPANEL Lines² are intended for façade cladding, fascias, infillings, soffits and external ceilings in ventilated manner. The ROCKPANEL Lines² are fastened to timber sub-frames. Fastening of the 8 mm panels to the timber sub-frame is carried out with corrosion resistant ROCKPANEL fixing clip with screws. Fastening of the 10 mm panels to the timber sub-frame is carried out with corrosion resistant nails or screws. Mechanical fasteners are specified by the ROCKPANEL group.

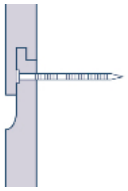
Installing methods

The ROCKPANEL Lines² 8 mm is only suitable for mounting with the supplied mounting clip. This clip allows for an invisible and flexible mounting method. The clip can both be used for fixed and demountable installations. For demountable installation, the tongue-and-groove board is simply inserted into the clip so that each panel can be removed separately. The demountable method allows for maximum working width, while the fixed method results in the minimum working width.

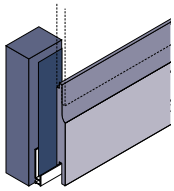


Fixed installation Demountable installation

The ROCKPANEL Lines² 10 mm panel is installed in the traditional invisible mounting way.



Both the ROCKPANEL Lines² 8 mm and 10 mm panel can be installed invisibly at ground level by using the ROCKPANEL starting profile (type K).



Dimensions and weight

Property			Value	Tolerances
Thickness and availability			8 mm 10 mm	± 0.5 mm
Length			3050 mm	± 2 mm
Panel width	8 mm 8 mm 10 mm 10 mm	type S type XL type S type XL	164 mm 295 mm 164 mm 295 mm	± 1 mm
Working width	8 mm 8 mm 10 mm 10 mm	type S type XL type S type XL	151 - 156 mm* 282 - 287 mm* 146 mm 277 mm	
Density			1050 kg/m³	± 150 kg/m³
Weight	8 mm 10 mm		8.4 kg/m² 10.5 kg/m²	- 1.65 / + 1.80 kg/m² - 1.95 / + 2.1 kg/m²

* minimum /maximum working width

Colour fastness

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

	Value (ISO 105 A02)
ROCKPANEL Lines²	3-4 or better

Physical properties*

Property	Value
Thermal conductivity	0.37 W/m·K
Water vapour permeability ROCKPANEL Lines²	S_d < 1.80 m at 23°C and 85 %RH
Coefficient of thermal expansion	α = 10,5·10 $^{-3}$ mm/m·K
Coefficient moisture expansion 23 °C/50 %RH to 92 %RH	0.302 mm/m after 4 days
Impact resistance Hard body impact (1J) Hard body impact (3J) Hard body impact (10J)	 Category IV Category III, II and I -

* Tests are executed according the European test guideline for ROCKPANEL. EAD 090001-00-0404

Properties in relation to fire

The ROCKPANEL Lines² panels have been classified in accordance with EN 13501-1 with the following parameters:

Fixing Method	Ventilated or non-ventilated*	Vertical wooden sub-frame*
Mechanically fixed	ROCKPANEL Lines² 8 mm Ventilated	B-s2,d0**
Mechanically fixed	ROCKPANEL Lines² 10 mm Ventilated	B-s2,d0

* The complete overview and description of the end use situation in which the classification is determined can be found in the relevant European Technical Assessment, see also 'Certification'.

** Application of a wooden sub-frame with the use of a 8 mm ROCKPANEL strip

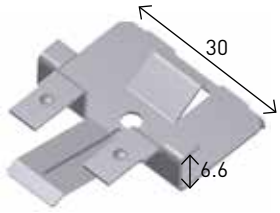
Suitable sub frames

The panels are attached to the building by fixing to a sub-frame of wood. The vertical battens should have a minimum thickness of 28 mm.

Appropriate preservative treatment of sub-frames

Use the appropriate part of EN 335 to identify the "use class" of a given service environment and geographical location. Table 1 in EN 335 will assist in determining the biological agents that can attack timber in certain situations. Then consider the type and required duration of the performance, select an appropriate level of durability and ensure that the specified timber or wood-based product has either a natural (see EN 350-2) or an acquired characteristic durability as the result of appropriate preservative treatment (see EN 351-1).

Fixings specified for use with ROCKPANEL Lines²

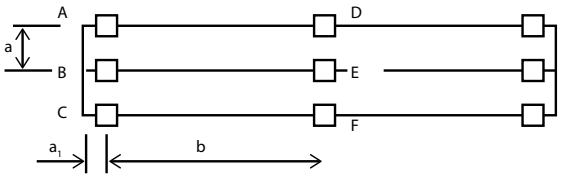
	Clip system for ROCKPANEL Lines² 8 mm	Torx T10	Ring-shank nail for ROCKPANEL Lines² 10 mm	Flat-top screw for ROCKPANEL Lines² 10 mm
Type	Fixing clip	Torx screw	2,1/2,3 x 27 mm	3,5 x 30 mm
Material	Material number 1.4310 Material thickness: 0.6 mm	Stainless steel material number 1.4301 according EN 10088	stainless steel material number 1.4401 or 1.4578 according EN 10088	stainless steel material number 1.4301, 1.4401 or 1.4578 according EN 10088
Length		25 mm	27 mm	≥29 mm
Shank diameter		2.3 - 3.5 mm	2.1 - 2.3 mm	2.3 - 3.5 mm
Head diameter		6.6 - 7.0 mm	4.5 - 4.8 mm	6.6 - 7.0 mm
Hole Ø fixed point (position M)		n.a.	2.0 mm	3.0 mm
Hole Ø moving point (Position C)		n.a.	3.0 mm	3.5 mm*

* Under certain circumstances a tension perpendicular to the shafts of the fixings in the fixing locations may occur.

Mechanical properties

Property	Value	Standard
Bending strength, length and width (f_{05})	≥ 27 N/mm²	EN 310
Modulus of elasticity m(E)	≥ 4015 N/mm²	EN 310

Design value of the axial load ROCKPANEL Lines² 8 mm

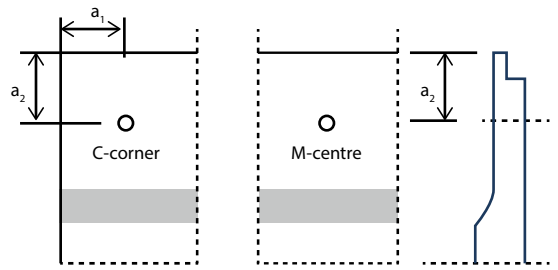


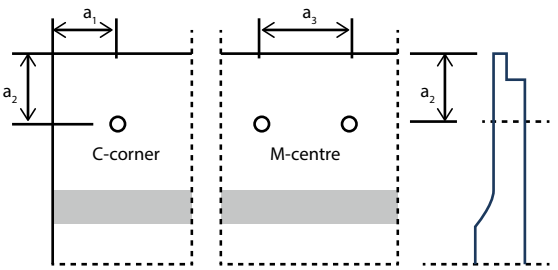
Position A and D: Only tongue loaded
Position B and E: Groove and tongue loaded
Position C and F: Only groove loaded
a: working width
a¹: ≥ 20 mm

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

	Type	b max	Edge batten			Intermediate batten		
Panel thickness: 8 mm			**Position A**	**Position B**	**Position C**	**Position D**	**Position E**	**Position F**
Clip	S	500 mm	53 N	84 N	39 N	69 N	113 N	60 N
Clip	XL	500 mm	53 N	92 N	39 N	69 N	113 N	60 N

Mechanical properties





C: Fixing in corner
M: Fixing at intermediate position
a_1: ≥ 15 mm
a_2: = 15 mm
a_3: ≥ 20 mm

Design value of the axial load Xd = Xd /gm in the UK*

Panel thickness	Type	b max	1 screw (M) 10 mm	2 screws (M) 10 mm	1 screw (C) 10 mm
Nail	S	600 mm	130 N**	261 N**	121 N
	XL	600 mm	130 N**	261 N**	130 N**
Flat top screw	S	600 mm	204 N	296 N	85 N
	XL	600 mm	204 N	357 N	116 N

* Assuming façade application in which the timber battens C18 are exposed to climate class 2 in accordance with EN 1991-1-1.
** By using timber battens out of strength class C24 according EN 338 a higher design value for the axial load can be achieved.

Environmental

The influence on air quality and release of dangerous substances to soil and water has to be determined to achieve the European technical approval. The analysis showed ROCKPANEL Lines panels contain no dangerous materials such as biocides. The manufacture of ROCKPANEL panels does not involve the use of flame retardants or cadmium. The formaldehyde concentration is ≤ 0.0105 mg/m³ mg/m³ which relates to formaldehyde class E1.

Visual appearance

Surface quality: ROCKPANEL Lines² panels 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).

Batches: ROCKPANEL panels are produced using incoming inspection, process assurance and quality control by which ROCKPANEL Lines² boards in standard RAL/NCS colours out of different batches can be combined. However, in project related orders, the whole order for a given project must be ordered as a single batch.

Packaging, storage and transportation

The panels are delivered on pallets, with a protective foam sheet between the front and back of the panels, 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

The panels can be cleaned with ordinary cleaning agents dissolved in lukewarm water, such as car shampoo. Organic solvents should not be used.

Certification

■ European Technical Assessment ETA-13/0204:	ROCKPANEL Lines[2], 8 mm and 10 mm tongue and groove panels

Additional information

The product data sheet ROCKPANEL Lines[2] clearly specifies the general product properties and is not related to national building regulations. Relevant information about the application of ROCKPANEL panels related to national building regulations or national guidelines can be found in the ROCKPANEL instruction guide and on the ROCKPANEL website. The 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.

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