

## Product description

Rockpanel boards for external cladding have been developed for a user-friendly and aesthetically pleasing finishing of facades, soffits, fascias and detailing. The boards are as durable as stone and as easy to work as wood. The boards are 100% resistant to weather, temperature and UV, and require very low maintenance. For a colour-fast facade, Rockpanel Rockclad is a suitable choice. This tough, decorative panelling can be supplied in all RAL/NCS colours.

## Application

Rockpanel board material is suited for ventilated construction, These systems have long been used in new build and renovation projects, both in residential and industrial housing, and contribute to a comfortable interior with a high degree of flexibility.

The unique nature and vapour-permeability of the board mean that Rockpanel Rockclad (without ProtectPlus) can in certain cases even be used unventilated.

It is ideal for dormers, roof renovations or lower facades. Please contact Rockpanel for advice when installing in a non-ventilated fashion.

### Rockpanel can be used in new build and renovation:

- facade and partly-cladded
- soffits and fascias
- detailing and roofline

## Product advantages

Rockpanel board material is as workable as wood and as durable as stone and therefore:

- cut edges do not need to be retreated
- dimensionally stable
- fire safe
- standard (durable) version suitable for curved sections
- 100% recyclable
- low in maintenance
- light in weight
- can easily be cut to size on-site
- does not require pre-drilling
- can be delivered in all RAL/NCS colours from 100 m<sup>2</sup>
- can be used unventilated

## Assortment

Rockpanel Rockclad can be supplied in 20 standard colours and from 100 m<sup>2</sup> in every desired RAL/NCS colour.

For the current Rockclad range please consult our website: [www.rockpanel.co.uk](http://www.rockpanel.co.uk).

## Optimal protection with ProtectPlus

This transparent coating makes the boards self-cleaning so that dirt is washed away by rainwater. The coating also improves the boards' UV resistance, resulting in the period of colourfastness being extended further still.

ProtectPlus is optional on Rockpanel Rockclad and can only be applied during the production. Rockpanel boards with ProtectPlus can not be re-painted.

## Properties

The board material is available in two different strengths.

*Durable*: for use in regular facade and roofline applications.

*Xtreme*: for use when a greater degree of impact resistance is required, usually towards groundlevel.

### Dimensions and tolerances of board material

	Durable		Xtreme	
	Panel length in mm*	2500/3050	2500/3050	3050
Panel width mm	1200		1200	
Panel thickness in mm	6	8	8	10
Length/width tolerance in mm	+2/-2		+2/-2	
Thickness tolerance in mm	+0,5/-0,5		+0,5/-0,5	
Diagonal tolerance in mm	≤ 4		≤ 4	

\* For different dimensions, contact Rockpanel for the possibilities.

### Material properties

Property	Value		Unit	Standard
	Durable	Xtreme		
Mechanical properties				
Modules of elasticity	4015	5260	N/mm <sup>2</sup>	EN 310
Characteristic bending strength	≥ 27	≥ 30	N/mm <sup>2</sup>	EN 310 and EN 1058 f <sub>os</sub>
Optical properties				
Colour stability Rockclad	4 / 4-5* (3.000 hours; Xenon test)		Greyscales	ISO 105 A02-93
Fire Euroclass	Euroclass B-s2-d0**			EN 13501-1
Physical properties				
Density nominal	1050+150/-150	1200+150/-150	kg/m <sup>3</sup>	
Nominal mass of surface	8 mm: 8,4 6 mm: 6,3	8 mm: 9,6	kg/m <sup>2</sup>	
Dimensional stability				
- Dimensional stability	11*10 <sup>-3</sup>		mm/(m <sup>2</sup> K)	EN 438-2
- Dimensional stability length/width per 23°C/50% RF change 23°/95% RF	0,302		mm/m (after 4 days)	
Water vapour resistance				
- At 23° C and 85% RH	9/19 (incl. PP)*		mNsg-1	EN-ISO 12572:2001
Water uptake via the sawn edge after 28 days:				
- At 20° C and 65% RH	< 1,3		%	
- At 2° C and 90% RH	< 0,2		%	

\* Rockpanel Rockclad with ProtectPlus coating.

\*\* Depending on the structure sub-classification S1 can be attained in some cases.

### Fire safety

Rockpanel board material is subject to thorough testing and is a classified fire-safe building material. In the event of a fire the mineral wool structure of Rockpanel remains fully intact. There is absolutely no drop-formation and the risk of fire spreading is prevented.

## Installation

### Ventilated external-wall systems

Rockpanel products are applied in ventilated constructions. Typically this method of construction has a cavity wall with a inner and outer layer, resulting in a ventilated space between the cladding and insulation.

#### ■ Open facade

Here the use of water-draining sections is avoided, as a result of which some of the rainwater for run-off runs into the cavity behind the cladding.

When fixing back to **timber battens** with open joints, the construction behind the vertical batten should be protected by a breathable membrane which should be water repellent, non capillary and UV resistant. A minimum cavity depth of 20 mm is required for sufficient ventilation although it is common for the depth to be in direct correlation with the thickness of batten.

Rockpanel recommends a cavity depth of at least 60 mm for **aluminium constructions** by which the insulation should meet the standard EN-131162, f.e. Rockwool with a density between 51 and 69/m<sup>3</sup>.

#### ■ Closed facade

Here rainwater is drained off as much as possible on the outer side of the cladding. The recommended cavity depth for a ventilated cavity is min. 20 mm, but in practice they use the thickness of the timber battens what represents 28 mm or 34 mm.

### Unventilated use

Rockpanel Rockclad (without ProtectPlus) is vapour-permeable. These products can also be used in unventilated constructions such as:

- infilling
- (sidewalls of) dormers
- roof gutters
- fascia boards
- and other detailing

When using Rockpanel Rockclad (without ProtectPlus) for unventilated applications, there is therefore no need to use ventilated glass beading or leave ventilation space between the Rockpanel board and the insulation. The benefits:

- there is extra space for thicker and better insulation
- the structure can be made thinner for comparable insulation

For non-ventilated applications of Rockpanel Rockclad (without ProtectPlus) following pre-conditions are required:

- interior climate with a maximum vapour pressure of 1330 Pa (normal housing);
- the  $s_a$  values of the materials on the inside of the structure down to the insulation should sum up to at least 7 m; this value can be achieved with a 0.15 m-thick PE membrane as vapour barrier and drywall;
- the  $s_a$  values of the materials on the outside of the structure down to the insulation should not amount to more than 4 m;
- the inside of the structure should be airtight so that no warm air (with many grams of moisture per m<sup>3</sup>) can penetrate the structure;
- the attachments of the boards to the structure should be water-tight, so that no rainwater or cleaning water can get behind the cladding. Due to this, horizontal joints are not allowed according the BBA approval. At vertical joints a 3 mm by 60 mm EPDM self-adhesive foam gasket should be used.

Always contact Rockpanel when using unventilated applications.

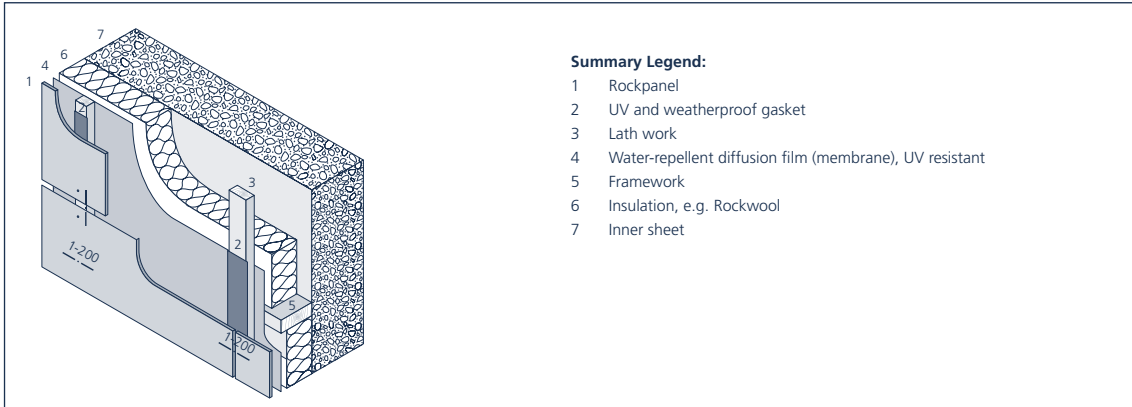
**Fixing**

Rockpanel can be fixed on wood and aluminium constructions, either mechanically or by means of an adhesive system.

**Mechanical fixing on wood**

- Rockpanel ring shank nails (stainless steel 316), 2,7/2,9 x 32 mm. Fixing can be done with a synthetic hammer or a pneumatic hammer. Nail heads in the same RAL colour combine perfectly with the RAL colour of the board material.
- Rockpanel torx screws (stainless steel 316) 4,5 x 35 mm. Torx head in the same colour as the board if required.

Because Rockpanel board material almost doesn't expand or shrink, pre-drilling is not necessary.

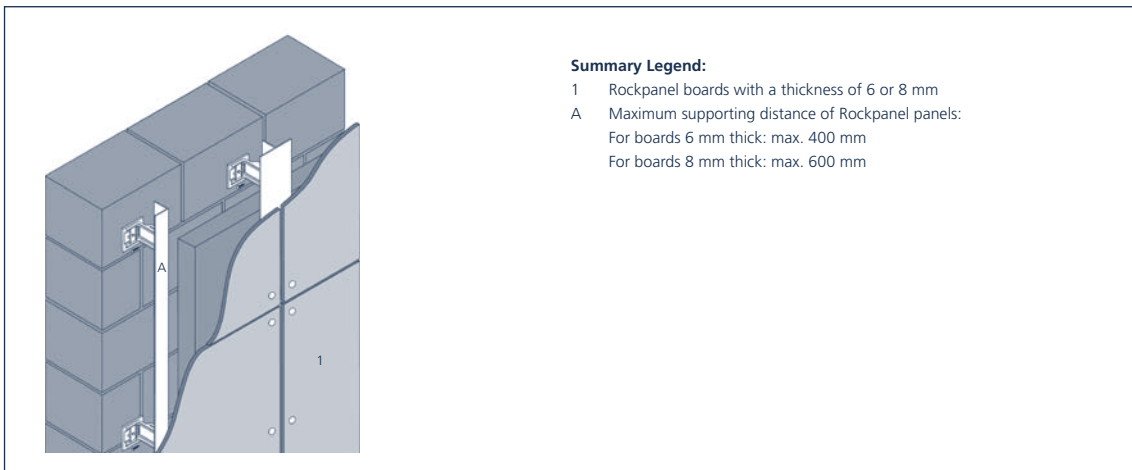


**Mechanical fixing on aluminium**

For the mounting of Rockpanel on aluminium load-bearing sections, AP14-5 x 18-S flat-topped aluminium pop rivets can be used:

- material EN-AW-5019 in conformity with EN 755-2 and
- material number rivet 1.4541, in conformity with EN 10088-3 see also the BBA approval

Take into account here that the warping of the aluminium load-bearing sections is greater than that of the Rockpanel board material. By applications of fixed points and moving points the fixed points should pre-drilled with  $\varnothing$  5,2 mm and the moving points with  $\varnothing$  9 mm.



**Adhesive installation on wood or aluminium structures**

Adhesive installation of Rockpanel board material should be carried out according to the instructions of the supplier of the adhesive system and under his supervision and warranty conditions. Adhesive installation on a metal support structure or, in the case of wood, on a Rockpanel strip is a more durable implementation than direct adhesive installation on a wooden support structure. See the Rockpanel website for more information and an adhesive supplier with a suitable system.

**Distances between fastening points**

When fixed Rockpanel boards must be assembled with above mentioned fixings on a suitable subframe (aluminium rail support or timber frame) and free of tension. When determining the subframe the following should be kept in mind:

- wind loading regarding location & building height
- the maximum fixing centres for the boards
- the required ventilation provisions
- unimpeded movement of the boards
- legal local requirements

Consult the table to see the spacing between points of fastening applicable to mechanical fixing. Always contact Rockpanel in the event of situations that depart from the norm.

The following fixing pattern can be applied as the assumptions like basic windspeed, site -altitude, building height and so on fits to the project or are overestimated:

<p><b>United Kingdom</b>                  Basic wind speed <math>\leq 23</math> m/s                  Site altitude <math>&lt; 50</math> m above sea level                  Building height <math>\leq 10</math> m                  Distance to the coast <math>&gt; 10</math> km                  Span over 2 fields (see drawing)                  Max permissible deflection 0,85%</p> <p>ar1: 15 mm                  ar2: 50 mm</p>			
	Span	am Intermediate support	ar Edge support
8 mm			
Rockpanel Torx screw	600 mm	255 mm	470 mm
Rivet AP14-5 x 18-s	600 mm	340 mm	500 mm
6 mm			
Rockpanel Torx screw	400 mm	260 mm	300 mm
Rivet AP14-5 x 18-s	400 mm	290 mm	300 mm

Contact Rockpanel for further guidance if any of the pre-conditions above cannot be met.

## Joins and board connections

The following guidelines apply when installing the boards:

- Rockpanel is dimensionally stable, and therefore resistant to changes in length and width. When constructing keep in mind that other materials expand or contract to varying degrees compared to Rockpanel boards.
- Boards, assembly and building tolerances play an important role in the joint detail.
- Apply joint tape to the seams to protect the back construction against weather influences.
- The joints should be such that sufficient ventilation and/or drainage is ensured in order to prevent damage as a result of retained moisture.
- Design joints > 5 mm, so that rainwater drops off, and is not held by capillary effect.

## Workability

### *Sawing*

When working Rockpanel products, as a rule the same guidelines apply as if you were working with wood products.

- hand saw, e.g. a hardpoint hand saw
- circular saw, e.g. a fine-toothed saw blade
- fretsaw, e.g. a fine-toothed saw blade or a saw blade with tungsten granules

### *Drilling*

Rockpanel board material does not require pre-drilling of over-sized fixing holes prior to installation on timber studs.

This means that work can be done in greater detail on the building site, making flawless and optimal finishing a simple matter. With rivets, fixed anchorages are advised to be drilled at 5.2 mm and a sliding attachment with 8 mm. Pre-drilling can be done with a HSS-steeldriller.

### *Edge finishing*

Rockpanel board material is resistant to the elements and does not delaminate or rot. Cut edges do not need to be retreated. Chamfering can be done easily by using a leftover strip of Rockpanel to lightly rub down the edge. The sides can be given a finishing coat of paint for aesthetic purposes in the same RAL/NCS colour.

### *Storage*

Rockpanel is insensitive to moisture. Nevertheless it is recommended that the board material be stored on a flat pallet in dry, flat, frost-proof and protected conditions. Never stack more than two pallets on top of each other. 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**

Rockpanel board material is as durable as stone and resistant to the effects of temperature and the weather, and therefore requires little maintenance. The colours remain stable and the board material retains its original appearance for a long time. If required, the board material can be cleaned using, for example, a car shampoo or an all-purpose cleaner, diluted in the manner recommended on the packaging.

Rockpanel Rockclad can optionally be provided with the ProtectPlus finish. This transparent coating makes the sheets self-cleaning, so that dirt is washed away by rainwater which further reduces maintenance costs. The coating also improves the sheets' UV resistance, resulting in the period of colourfastness being extended still further.

## Specifications and CAD drawings

Specifications and CAD drawings can be downloaded from [www.rockpanel.co.uk](http://www.rockpanel.co.uk).

## Availability

Consult the dealer locator on [www.rockpanel.co.uk](http://www.rockpanel.co.uk) for a Rockpanel distributor in your area.

### Certification

■ **BBA Certified**

Rockpanel boards meet key safety standards for building and are BBA approved. Certificate 04/4168, second edition, relates to compressed and bound rock wool boards with a decorative coating on one side, for use as a back ventilated cladding panel system. This Agrément Certificate contains important data on durability, installation and compliance with Building Regulations, not just in England and Wales, but in Scotland and Northern Ireland, too. The certificate is available on [www.rockpanel.co.uk](http://www.rockpanel.co.uk).

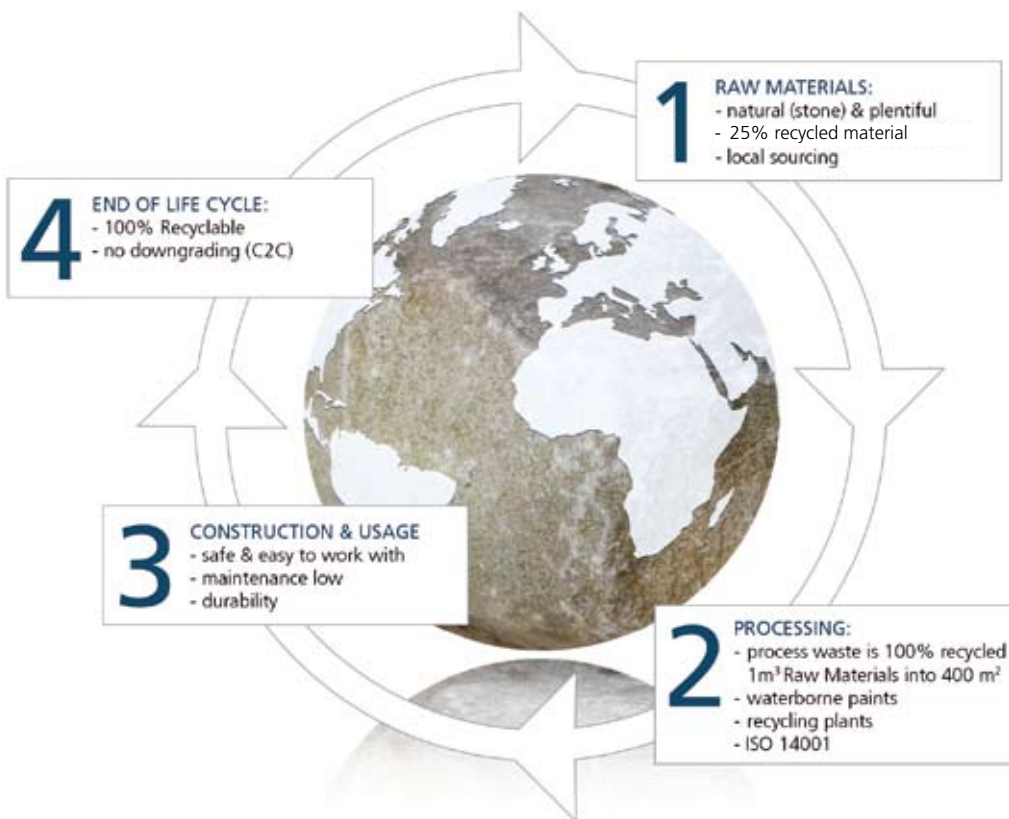
■ **ETA certified**

Rockpanel Durable Version board material is also ETA certified and therefore bears the CE quality label. The certification means that the product complies with the very stringent European Assessment Directive.

ETA-07/0141 "Rockpanel Durable 8 mm finish Colours". Documents are available on the Rockpanel website.

### Sustainability

Rockpanel is a sustainable building material throughout the material's useful life.



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