

Product description

Rockpanel Structure is a very durable external cladding board with a lightly textured finish, developed for fast, user-friendly application on, soffits, fascias and in areas of detailing. The boards are as workable as wood, durable as stone and resistant to weather.

Application

Rockpanel board material is designed for use in ventilated constructions. 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 Rockpanel Structure board mean that in certain cases it can be used in non ventilated constructions. Please ensure that you contact Rockpanel for advice prior to planning any non ventilated construction. It is ideal for, for example, dormers, roof renovations or detailing.

Rockpanel Structure can be used in new construction and renovation:

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

Product advantages

Rockpanel board material has many unique features including:

- edge finishing against moisture not needed
- light in weight
- can easily be cut to size on site
- does not require pre-drilling
- standard (durable) grade suitable for curved sections
- dimensionally stable
- fire safe
- recyclable at end of life
- can be used in non ventilated constructions

Range

Rockpanel Structure is available in 6 RAL colours and can be delivered from stock. As a result of the textured surface we advise that Rockpanel Structure orders are placed in single batches as differences between batches might occur. Furthermore we can not guarantee re-production of colours.



RAL 7005 Mouse Grey RAL 7016 Anthracite Grey RAL 7021 Black Grey RAL 7024 Graphite Grey RAL 7035 Light Grey RAL 9010 Pure White

Properties

Durable: for general applications on detailing.

Dimensions and tolerances of board material

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

* For non standard dimensions, contact Rockpanel.

Material properties

PROPERTY	VALUE	UNIT	STANDARD
MECHANICAL PROPERTIES			
	Durable		
Modules of elasticity	4015	N/mm ²	EN 310
Characteristic bending strength	≥ 27	N/mm ²	EN 310 and EN 1058 f _{os}
OPTICAL PROPERTIES			
Colour fastness, Structure RAL 9010	3-4 (3.000 hours; Xenon test)	Greyscales	EN20105-A02 and EN20105-A03
FIRE EUROCLASS			
Fire Classification	B-s2-d0*	EN 13501-1	
PHYSICAL PROPERTIES			
	Durable		
Density nominal	1050	kg/m ³	
Nominal area density	6 mm: 6,3 / 8 mm: 8,4	kg/m ²	
DIMENSIONAL VARIATION			
Linear expansion coefficient	11*10 ⁻³	mm/(m°K)	EN 438-2
Change in length due to moisture at 23°C/50% RH change 23°/95% RH	0,302	mm/m (after 4 days)	
Vapour permeability S _d - At 23° C and 85% RH	9	mNsg-1	EN-ISO 12572:2001
Water uptake via the sawn edge after 28 days: - At 20° C and 65% RH - At 2° C and 90% RH	< 1,3 < 0,2	% %	

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

Fire safety

Rockpanel board material is extensively tested and classified and is a fire-safe building material. Should a fire occur, with Rockpanel boards there is no risk of drop formation and the risk of fire spread is extremely slight.

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 met the standard EN-131162, f.e. Rockwool with a density between 51 and 69/m³.

■ **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

Thanks to the vapour-permeability of Rockpanel Structure, they can also be used in non ventilated construction such as:

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

When using Rockpanel for unventilated applications, there is 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 following pre-conditions are required:

- interior climate with a maximum vapour pressure of 1330 Pa; (normal housing)
- the s_d 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 vapourbarrier and drywall;
- the s_d 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^3) 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.

Always contact Rockpanel before installing our products in a non ventilated application.

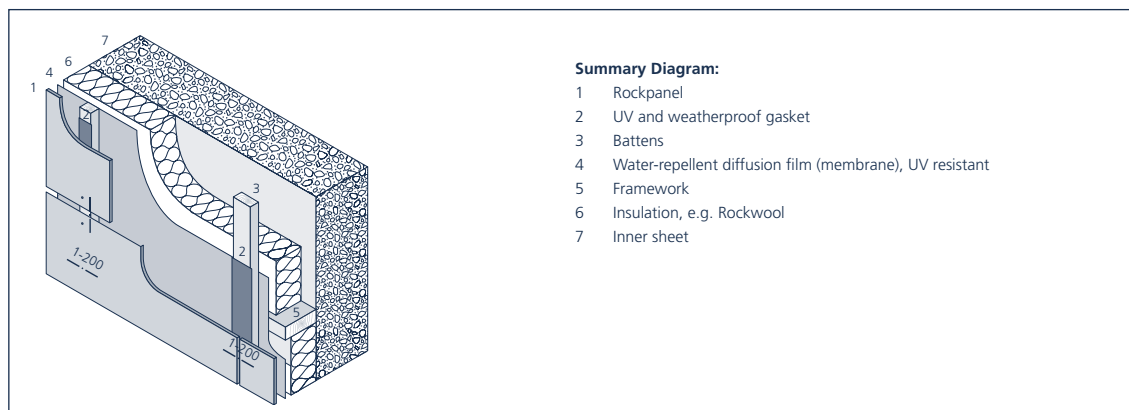
Fixing

Rockpanel can be fixed in several ways:

- On wood sub construction
- Using nails, screws or approved adhesives

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 faced hammer or a pneumatic hammer.
- Rockpanel torx screws (stainless steel 316) 4,5 x 35 mm.
- Pre-drilling is not necessary.



Adhesive installation on wood 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 Rockpanel strip attached to the wooden sub construction 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

Rockpanel board material must be assembled with the fixings mentioned previously onto a wooden subframe which is 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 following 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 used if all assumptions like basic windspeed, site-altitude, etc. or are overestimated:

<p>United Kingdom Basic wind speed ≤ 23 m/s Site altitude < 50 m above sea level Building height ≤ 10 m Distance to the coast > 10 km Span over 2 fields (see drawing) Max permissible deflection 0,85%</p> <p>a_{R1}: 15 mm a_{R2}: 50 mm</p>			
	Span	a_m Intermediate support	a_r 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.

Rockpanel Profiles is a carefully assembled range of profiles made from high quality aluminium.
 Profiles B-G-I and J are specific to the board thickness they have been manufactured for.

ALUMINIUM PROFILES

STANDARD LENGTH IS 3055 MM		COLOUR	AVAILABILITY
	Profile A 	Blanc Standard colours	1 week 4 weeks
	Profile B 	Blanc RAL 9005	1 week 1 week
	Profile C 	Blanc Standard colours	1 week 4 weeks
	Profile D 	Blanc Standard colours	1 week 4 weeks
	Profile E 	Blanc Standard colours	1 week 4 weeks
	Profile F 	Blanc Standard colours	1 week 4 weeks
	Profile G 	Blanc Standard colours	1 week 4 weeks
	Profile H 	Blanc Standard colours	1 week 4 weeks
	Profile I 	Blanc	1 week
	Profile J 	Blanc	1 week

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 with 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 > 5mm, so that rainwater runs off, and is not subject to capillary action.

Workability

Sawing

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

- hand saw, e.g. a handpoint hand saw
- circle saw, e.g. a fine-toothed tungsten carbide saw blade
- fretsaw, e.g. a fine-toothed metal saw blade or a tungsten granules saw blade

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.

Edge finishing

Rockpanel board material is resistant to the elements and does not delaminate or rot. Cut edges do not need to be treated. 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. The panels should be raised when being machined. Never stack more than 2 pallets on top of each other. The panels should not be slid over one another. Protective foam membranes should be placed between the boards again to protect the surface layer after, for example when the panels are stacked after having been sawn.

Specifications and CAD drawings

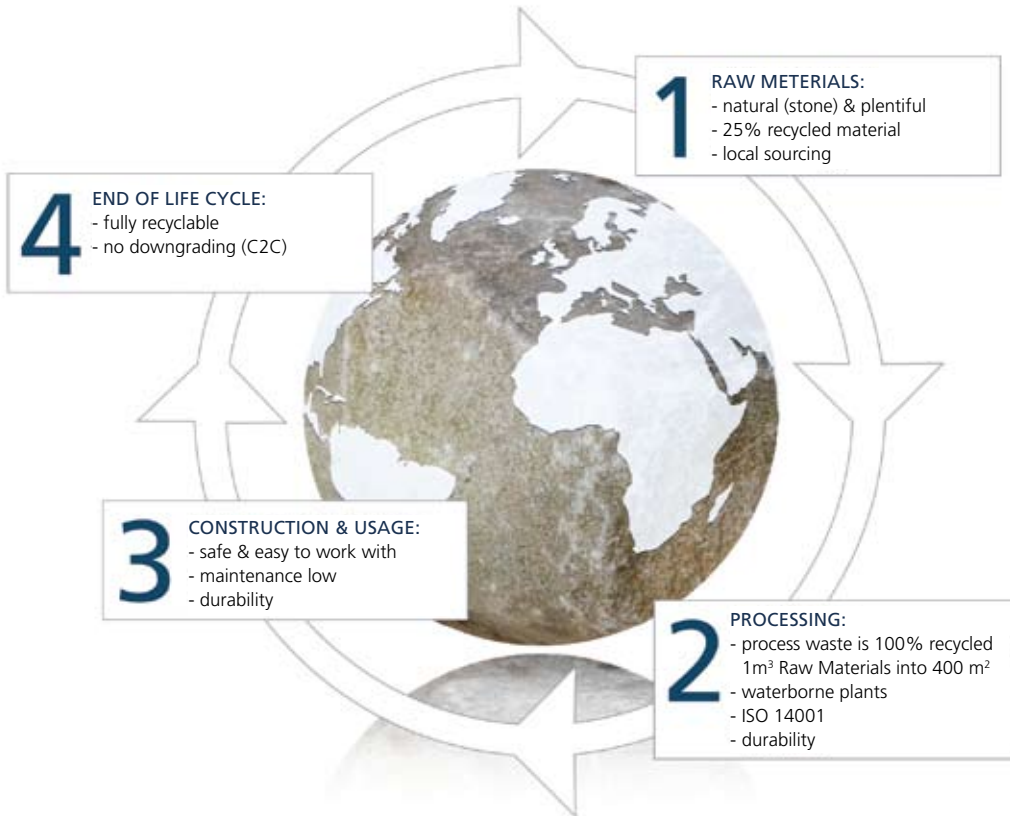
Specifications and CAD drawings can be downloaded from www.rockpanel.co.uk.

Availability

Consult the dealer locator on www.rockpanel.co.uk for a Rockpanel distributor in your area.

Sustainability

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



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