

# RCM (Roofing and Cladding Materials Ltd)

**PRODUCT** Multipurpose

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**Version 2**

**ISO No.**

5153

## General Description

RCM Multipurpose general-purpose fibre-cement boards for use internally as wall liner or tilebacker boards on non-loadbearing and loadbearing walls, or externally as structural and non-structural sheathing boards behind façade rainscreen cladding applied to steel - and timber-frame substrate walls, in new and existing buildings subject to height restrictions.

## General Applications

**Key applications**  
 - Internal and external walling  
 - Flooring and ceilings  
 - Facia's and soffit liner  
 - OEM applications for improved strength and density  
 - Tile backer board  
 - External sheathing

## Product Appearance

Light grey.

## Composition

Fibre reinforced cement

## General Technical Properties

Unit	Value	Applicable Standard
Nominal Density (Oven Dry)	kg/m <sup>3</sup> 1375	BS EN 12467:2012
SoundInsulation	dB Estimated 28dB for 6.0mm	
Avg. Bending Strength (Modulus of Rupture)	N/mm <sup>2</sup> 10.5 (saturated)	
Internal Bonding	N/A	
Biological Resistance	Highly resistance	BS EN 12467:2012
MoR (Modulus of Rupture) Oven Dry - Across	Mpa 19	
MoR (Modulus of Rupture) Oven Dry - Along	Mpa 11	
MoR (Modulus of Rupture) Saturated - Across	Mpa 14	
MoR (Modulus of Rupture) Saturated - Along	Mpa 7	
Water Absorption (by dry weight)	% 30	BS EN 12467:2012
Thermal Conductivity	W/mk 0.12	
Density at Oven Dry	g/cm <sup>3</sup> 1.33-1.42	
Moisture Content	% 8	
Thermal Conductivity (estimate at 20°C)	W/mk 0.12	BS EN 12524 : 2000
Moisture Movement (saturate to EMC)	% 0.06-0.08	

## Surface Condition

Front - Smooth  
 Back - Textured

The smooth face should be fixed outermost.

## Dimensional Tolerance

Length	mm	+1/-2
Width	mm	+1/-2
Thickness	%	±10

## Dimensional Conformity

Size	kg/m <sup>2</sup>	(kg/sheet)
2400 x 1200 x 6.0mm	9.23	26.6
2400 x 1200 x 9.0mm	14.3	41.2
2400 x 1200 x 12mm	19.2	55.3
2440 x 1220 x 18mm	29.7	85.5
2700 x 1200 x 9.0mm	14.3	46.3
3000 x 1200 x 12mm	19.2	69.1

Nominal Oven dry weight kg/m<sup>2</sup> 8.3(6.0mm thickness), 16.5(12.0mmthickness)

Straightness of edges	mm	TBA
Squareness of edges	mm	TBA

## Reaction to Fire

Non combustible	Class	A1	BS EN 13501-1:2018+A1:2009
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## Fire Resistance

Unloaded	Integrity	contact RCM Technical Support	BS EN 1364-1:2015
	Insulation	contact RCM Technical Support	
Loaded	Integrity	contact RCM Technical Support	BS EN 1365-1:2012
	Insulation	contact RCM Technical Support	
Surface Spread of Flame	Class	No Surface Flame Spread 1	BS EN 476 : Part 7 : 1997
Fire Propagation	Index of performance	(I) = 0.0 - 1.8	
	Sub-index	(iI) = 0.0 - 1	BS EN 476 : Part 6 : 1989

## Certification & Durability

CE marked	Yes	
Certification	Yes	BBA
Durability	The durability of the boards is satisfactory. Provided the boards are used in accordance with the BBA Certificate and the Certificate holder's instructions, and are fixed to satisfactory, stable and durable backgrounds by fully trained operatives, they will have an estimated service life in excess of 30 years when used in external applications and should have a life equal to the building in which they are installed when used in internal applications. Pass heat and rain durability test as per EN12467.	

Product Testing and Certification

EN13501-I class A1  
BS EN ISO 1716  
BS EN ISO 1182  
EN L2467 :2AtZ  
BS476 Part 6&7

## Limitations of Use

Installation	Reasonable precautions must be taken to ensure the boards are not damaged during installation. When cutting the boards, power and hand tools should be used with care and in accordance with the Certificate holder's recommendations. Power tools should only be used by individuals who have been instructed and trained to use them safely. Appropriate Personal Protective Equipment (PPE) should be used. It is important to observe appropriate health and safety legislation when working on site (that is, using personal protective clothing and equipment). The Certificate holder should be consulted for material safety data sheets and advice. When working in enclosed areas, precautions should be taken to ensure dust levels are controlled in accordance with the current issue of EH40/2005.
Water protection	External walls must have suitable weather protection on the outside and a ventilated cavity must be provided. The products must be treated as a conventional sheathing boards with regard to detailing and damp-proofing at openings, eaves and sole plates, and the fixing of wall ties. Where required by design, the addition of a breather membrane must be in accordance with BS 5250 : 2011.
Fixings	For fixing into SFS framing 4.8mm x 38mm self-drilling wingtip fixings suitably treated against corrosion should be used. For fixing into Timber framing 4.2mm x 42mm self-drilling fixings suitably treated against corrosion should be used.
Applications	The boards are fixed to the steel/timber studs using the specified screws (see section 1.3) at maximum 300 mm spacing on board end supports and intermediate vertical supports, ensuring that the screws are flush-fitted (that is, not overtightened), and positioned at a minimum of 12 mm from the edges of the boards and a minimum of 50 mm from the corners. Once the first board is installed, subsequent boards are installed butt-jointed, with a 2 mm gap between each board.

## Health & Safety

See separate MSDS available at [www.buildingboards.co.uk](http://www.buildingboards.co.uk)

## Handling & Storage

Handling	The boards are supplied covered with polythene on timber pallets and can be offloaded either by mechanical handling equipment or by manually removing individual boards. Each pallet bears a label including the load number, product name, product size, board quantity and manufacturer's product certification logo. The boards must be stored on a firm, flat and level surface with sufficient support to prevent bowing. Boards should be stored under cover and kept dry prior to fixing. If the boards become wet, they must be sufficiently dry prior to use. Manual off-loading of the boards should be carried out by a two-person lift, with care to avoid unnecessary strain and injury.
Cutting	RCM can supply Poly Crystalline Diamond (PCD) blades suitable for cutting Multipurpose in a range of diameter and bore sizes, please contact RCM Technical department for further information.  When cutting the boards, power and hand tools should be used with care and in accordance with the Certificate holder's recommendations. Power tools should only be used by individuals who have been instructed and trained to use them safely. Appropriate Personal Protective Equipment (PPE) should be used. The raw materials of ordinary Portland cement, crystalline silica and cellulose are mixed in a controlled process and picked up by the sieve cylinder to form the boards prior to autoclaving. Once hardened, the boards are finished by cutting and drying, before storage. The boards are manufactured to the specification detailed in BS EN 12467 : 2012.
Screws	For fixing into SFS framing 4.8mm x 38mm self-drilling wingtip fixings (FIX006) For fixing into Timber framing 4.2mm x 42mm Climaseal self-drilling fixings (FIX005)
Joints	Where a sheathing board is specified within a fire-resistant external wall to one of the fire tests standards, BSEN1364-1:2015, BSEN1365-1:2012, BS476-21:1987, BS476-22:1987. The board should be installed as per the applicable fire test and guidance from the RCM technical team.  <b>Fire rated walls</b> - Multipurpose is typically tested either with lightly butted joints or with a 2-5mm board gap filled with an RCM fire seal mastic filling the joints. On site to allow for expansion and contraction, Multipurpose boards should be installed as per RCM fixing guidance. However, there is a very small risk during construction in highly exposed locations or where boards have been exposed to excessive moisture for prolonged periods minor expansion of board may occur. In this situation our recommendation would be for a gap of 2-5mm to be left between the boards and an RCM seal fire mastic used within the joints  <b>Non fire rated walls</b> - Multipurpose can all be butt jointed for limited exposure periods that are not subjected to excessive moisture penetration. As a precaution where excessive moisture penetration situations arise, our guidance has typically been to leave a small gap of between 2-5mm. Where air leakage is a consideration all RCM sheathing boards joints should be taped with RCM tapes or filled with RCM mastic. We recommend that all products are taped to seal against weather infiltration to the underlying building fabric and construction and to the board edges.
Nailing limitations	RCM Multipurpose can be cut, drilled and nailed with conventional woodworking tools. RCM Multipurpose is not intended for use below DPC.  The following recommendations and limitations are important to ensure the proper use and benefits of RCM Multipurpose.  Failure to strictly adhere to such recommendations and limitations may void the limited warranty.  RCM Multipurpose is resistant to normal weather conditions, but it is not intended for immersion in water. Cascading roof/floor water should be directed away from the sheathing until appropriate drainage is installed.  Avoid any condition that will create moisture in the air and condensation on the exterior walls during periods when the exterior temperature is lower than the interior. The use of forced air heaters creates volumes of water vapour which, when not properly vented, can condense on building materials. The use of these heaters and any resulting damage is not the responsibility of the supplier. Consult heater manufacturer for proper use and ventilation.  When Multipurpose is used in slanted wall applications, that portion of the wall must be temporarily protected from the elements by the use of a water-resistant barrier prior to application of the cladding. Do not allow water to pond or settle on sheathing. Also, exposed wall ends such as those that may be found in parapets must be covered to prevent water from infiltrating the cavity with EDPM.  Do not laminate RCM Multipurpose to masonry surfaces; use furring strips or framing.  For all installations, design details such as fasteners, sealants and control joints per system specifications must be properly installed. Openings and penetrations must be properly flashed and sealed.  Fixings should be flush to the face of the board, not over-tightened.

Fixings should be flush to the face of the board, not countersunk.

When Multipurpose is used in facade construction, install boards so a board joint gap of 2mm is formed on both horizontal and vertical joints, finished with RCM FR- PRO sealant or RCM Joint Tape.

When installing the boards in close proximity to certain flue pipes or heat-producing appliances, the follow provisions of the national Building Regulations.

Boards can be left permanently exposed.

#### **DISCLAIMER OF LIABILITY**

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