



RESISTANT BUILDING PRODUCTS LTD

Most Frequently Asked Questions

multi-proXS

multi-rend

multi-pro

MoistSure
Tile Backer Board

BASE BOARD

This document details the most frequently asked questions relating to Resistant Building Products range of magnesium oxide boards which include; multi-pro, multi-pro MoistSure, multi-proXS, multi-rend and Base Board.



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1.0 Strength & Durability

When wet do the boards lose any strength? When dry do they recover all their original strength?

Yes, the boards will lose some strength when wet. In our BBA test report S151905, Section 9 outlines the results for pull-through resistance of fixings. There were multiple tests carried out which included a pull-through test at control conditions when the boards were dry and a pull-through test after the boards were immersed in water at 23°C for 7 days. There was a slight loss in strength when the boards were tested after immersion however when they revert to their original dry state, almost all strength is retained.

Do we have a pull-out test for screws?

A series of our boards have been tested for pull-out strengths with Ejot, Sympafix and Rawlplug fasteners to name a few. These reports are available upon request. Contact details are on page 12.

Will the board support fittings?

The boards will support light fittings only such as; toilet roll holders, shower curtain rails, small vanity mirrors, shelves, pictures etc. Appropriate fixings must be used along with rawl plugs. Other large fittings such as grab rails and cabinets must always be fitted into supporting studwork.

Will the boards bend to form curves?

The thinner the board the greater the flexibility. 3mm Multi-pro can be bent to 45 degrees and our 9 & 12mm boards can be curved to an 8m radius when fixed at 300mm centres.

What weight of tiles can Resistant Multi-pro MoistSure carry?

Resistant boards have been proven in testing at Napier University to hold over 100kg/m² of tile and tile adhesive weight on our 12mm Multi-pro MoistSure board. The full test report for this achievement is available upon request.

Do all Resistant boards share the same strength properties?

The boards do not share the same strength properties. Although material composition is very similar, the actual strength is determined by thickness, density and number of layers of alkaline resistant, glass fibre reinforcing mesh within each board.

- Multi-proXS is an extra strength board which has 4 layers of reinforcing mesh to provide engineering racking strength.
- Multi-rend also has 4 layers of reinforcing mesh to cope with rigorous demands of wind loadings and the weight of the render.
- Multi-pro & Multi-pro MoistSure are still very strong but only require 2 layers of reinforcing mesh.
- The Base Board range also has 2 layers of reinforcing mesh, but has a slightly higher density to increase robustness.

What is racking strength?

The Structural Timber Association details that vertical diaphragms or shear walls are commonly described as racking panels or walls in timber frame construction. They resist horizontal actions and are essential elements in the overall stability of the construction. A racking wall gains its strength from a wood-based board sheathing material or plasterboard lining material fixed to the walls studs which provide racking stability and sliding resistance by its connection to the horizontal diaphragms and foundations. The general construction and offsite manufacturing industry are mainly interested in boards which exceed Category 1 racking strength.

Which Resistant products are racking boards?

Resistant 6.5mm & 9mm Multi-proXS have been specifically developed to conform to racking requirements.

Resistant 9mm Multi-proXS is UKAS tested and proven to fully exceed the minimum Category 1 Racking resistance strength required when fixed at standard 150mm perimeter fixing centres (full reports available on request).

Resistant 6.5mm Multi-proXS is UKAS tested and proven to meet the minimum requirements of Category 1 Racking resistance when fixed at the closer 100mm perimeter fixing centres (full reports available on request).

Can the boards be used in contact with damp and to prevent water ingress?

No. Resistant boards will not deteriorate when in contact with moisture over prolonged periods but they are not designed to stop water ingress. The boards are breathable and allow the passage of moisture. Resistant boards will absorb moisture in damp conditions and release same when the ambient conditions allow. This process can be repeated continuously.

Are Resistant boards backed by a Guarantee?

Resistant's core range of boards (Multi-pro, Multi-proXS and Multi-rend) are covered by a BBA certificate. This details that Multi-pro and Multi-proXS are durable materials and should have a life equal to that of the structure they are installed. The durability and service life of the Multi-rend system will depend on the building location, immediate environment and intended use of the building, ensuring proper maintenance and repairs are carried out. The Multi-rend system can be expected to have a service life in excess of 30 years when used in the normal climactic conditions found in the UK.

In addition, Resistant Multi-pro MoistSure Tilebacker is backed by a 25 year Guarantee.

2.0 Fire Resistance & Reaction to Fire Rating

Fire Resistance

The fire resistance rating of a construction is the ability of the full assembly to resist a fire. The classified ratings of 30, 60, 90 & 120 minutes are not solely about the performance of a passive fire protection board, but about the performance of the entire assembly. UKAS Fire Resistance Tests are carried out on assemblies such as stud wall partitions which involve many components including timber framework, intumescent sealant, insulation, wall linings (for example Multi-pro) and the fixings, the **boards don't provide Fire Resistance minutes alone!**

Reaction to Fire Rating

The Reaction to Fire Rating of a product is a measure of how the material reacts when exposed to a flame. EN 13501 is the standard to assess materials to different Euroclass Codes. These codes break down performance into categories from A1 Non-combustible through to F (untested). All Resistant boards have been proven to achieve the highest possible A1 Non-combustible rating. This is equal to Promat Supalux and exceeds Promat Masterboard, Fermacell and gypsum boards. Flame retardant treated wood based products such as OSB3 may achieve Class B or C while untreated timber based products fall into the bottom categories D & E.

Resistant Building Products Fire Resistance Testing

Resistant have carried out numerous UKAS Fire Resistance tests on various partition assemblies designed to prove 60, 90 & 120 minute performance. A summary of UKAS Fire Resistance tests carried out can be accessed by downloading 'Resistant Wall Test Makeups' document from www.resistant.co.uk. Full test reports can be provided on request.

Resistant have also carried out fire resistance testing to the exacting standards of the Structural Timber Association (STA) to prove compliance with their industry guidance produced in association with the HSE "Design Guide to Separating Distances During Construction".

Resistant Fire Resistance Technical Assessment

It is not possible to test for every application and assessments are prepared by our technical department from the extensive range of testing and product information in our possession. Please contact our technical department with your enquiry providing as much specification information as possible including relevant drawings. When available and we will provide our prompt recommendation. Contact details can be found on page 12.

3.0 Cutting, Fixing, Fitting & Finishing

How can the boards be cut?

Very easily! By score and snap with a standard craft knife, Stanley blade and can be hand or machine sawn. We would recommend a saw with Tungsten Tipped Carbide blade. A video of the score & snap method can be found on the website at <http://www.resistant.co.uk/tilebacker-moisture/>.

What fixings do I use?

For internal use - any standard self-tapping countersunk screws are feasible. These should be readily available from all local merchants. On a full 8' x 4' sheet when fixed at 300mm centres vertically and at 600mm centres you will need 27 fixings per sheet.

For MoistSure tile backer – stainless steel or minimum 12 micron galvanised fixings should be chosen at all times.

For Service Class 2 conditions within a building cavity – minimum 12 micron zinc electro galvanised gun nail or stainless steel.

For Multi-rend external use boards – stainless steel fixings (please refer to our multi-rend brochure for full fixing details.)

Do Resistant boards need to be hard fixed or can they be dot and dabbed?

Resistant Building Products always recommend mechanically fixing the boards. In-house testing has been carried out using CT1 Grip & Grab adhesive, by fixing our boards back to timber and block, a suitable adhesion was achieved where the adhesive would only be suitable to offer a temporary fix. The adhesive could be used together with screws and nails for an extra strength fix. (Please see our 'Accessories Information Page' for more detail). Detailed mechanical fixing guides for all Resistant products are available for download from our web site www.resistant.co.uk.

Can Resistant boards be painted and plastered?

Before applying paint or plaster the board requires priming on face and edges with an acrylic-based primer. Please refer to the 'Primer Information Page' available for download from www.resistant.co.uk which details various primers which have been tested for use with the board.

Do Resistant boards require to be primed before applying tile adhesive?

The requirement for a primer would be detailed by the tile adhesive manufacturer. Resistant boards have been extensively tested with market leading BAL tile adhesives and acrylic primer. During testing, the bond between tile adhesive and Resistant board was significantly strengthened when primer was applied. **Tiles should be fixed to the rough side of the boards.**

Any other finishes that can be applied to Resistant boards?

Resistant boards are adaptable and have been used successfully in conjunction with market leading premixed renders, lime renders and plasters (refer to our 'Primer Information Page' for specific primer information), specialist exterior weatherproof finishes such as 'Resitex'. They can be bonded to plastic, steel and melamine faced coatings as well as insulations, brick slips and lightweight tiles.

4.0 Internal Use

Can 9 or 12mm Resistant Multi-Pro be used in place of plasterboard?

Yes. Our board have far superior properties in comparison with plasterboard such as fire resistance, impact strength, breathability performance and durability to damp.

What boards are recommended for use behind a wood burning stove?

All 12mm boards across the Resistant range are suitable for use behind a wood burning stove however 12mm Multi-Pro XS or 12mm Multi-rend would be suitable for the most demanding applications as these are the highest performing boards. Please see the 'Solid Fuel Stove Brochure' available for download at www.resistant.co.uk.

Are Resistant boards still breathable after surface finishes have been applied?

The boards can remain breathable but this depends on the type of finish and how it is applied. Always refer to manufacturers guidelines but as a rough guide, check WVP (Water Vapour Permeability) and Sd values. Paints with an Sd value below 0.14 are considered to be Class 1 Vapour Open and to have high breathability performance.

5.0 External Use

Can Resistant boards be used externally?

Yes, they can be used externally however they are not designed to provide a permanent exterior finish. They will stay looking good and last long when correctly specified, fitted and finished in semi-exposed external applications.

Resistant boards are commonly used for semi-exposed external applications such as soffit boards (more durable than plywood), underside of canopies, porches, carports, balconies, carpark ceilings, agricultural ceilings, underpasses, stairwells etc. For the most demanding external applications Multi-*rend* & Multi-*proXS* provide the highest performance.

Please note, the boards should not be specified for use in ground contact.

What is the maximum length of time a Resistant Multi-*rend* can be fitted and exposed to weather prior to rendering?

We recommend rendering the fitted board as soon as conditions allow, however the Multi-*rend* board can be left fully exposed for up to 3 months prior to rendering. Pay particular attention to preparation of boards to receive render base coat when boards have been exposed for a prolonged period. You must ensure the board has been allowed to fully dry throughout and that the surface of the board is brushed down to remove any debris, dusts and magnesium salts that may have migrated to the surface.

6.0 Rendering on to Resistant boards

Multi-rend must always be fitted exactly in accordance with detailed fitting guidelines provided in 'Resistant Multi-rend Brochure' available for download from www.resistant.co.uk.

Preparation of Multi-rend to receive render basecoats must be carried out in accordance with guidelines provided in the associated brochure. Specific guidance for preparation of boards to receive render may vary slightly from each render supplier – their guidance should be requested and followed to ensure validity of render supplier's warranty. A full list of render suppliers who have extensively tested and approve Resistant Multi-rend are named within the literature.

Rendering instructions for Resistant's Base Board range should follow the same protocols as seen in the Multi-rend fitting guidance.

What side of board do I render on to?

The ready keyed surface provided by the rough face of Multi-rend.

Can I put sand & cement onto Multi-rend board?

Multi-rend boards have a high suction capability and manufactured renders have additives which control the rate of curing to ensure a strong bond with the board. Sand and cement mixes have been used successfully numerous times with multi-rend carrier boards but due to lack of dedicated testing and quality assurance we cannot recommend this application for use. The decision of the compatibility is the sole responsibility of the render applicator.

7.0 Handling & Storage

How should Resistant boards be stored?

- Resistant boards are delivered on clearly labelled pallets, wrapped and packaged to prevent weathering and edge damage.
- Resistant boards should be stored flat on a pallet, in dry conditions indoors. Boards should not be leant upright for long periods of time.
- Whilst stored, moisture should not be allowed to drip on to or infiltrate between stored sheets to prevent surface staining.
- Boards should always be lifted by 2 people, not dragged across each other to prevent unnecessary scratching or damage and carried on edge.

8.0 Weights per Sheet / Pieces per Pallet

Multi-Pro

Board Size	Weight Per Sheet (Kg)	Pieces per Pallet
3 x 1220 x 2440mm	9.4	195
6 x 1200 x 2400mm	18.1	113
6 x 1220 x 2440mm	18.8	113
9 x 1200 x 2400mm	27.2	77
12 x 1200 x 2400mm	36.3	58

Multi-Pro XS

Board Size	Weight Per Sheet (Kg)	Pieces per Pallet
6.5 x 1200 x 2440mm	20.0	84
6.5 x 1200 x 2700mm	22.1	78
9 x 1200 x 2440mm	27.7	77
9 x 1200 x 2700mm	30.6	67
9 x 1200 x 3050mm	34.6	60
12 x 1200 x 2400mm	36.3	58

Multi-Rend

Board Size	Weight Per Sheet (Kg)	Pieces per Pallet
9 x 1200 x 2400mm	27.2	77
12 x 1200 x 2400mm	36.3	58

Base Board

Board Size	Weight Per Sheet (Kg)	Pieces per Pallet
10 x 1200 x 2400mm	33.1	58
12 x 1200 x 2400mm	39.7	54

Multi-Pro MoistSure

Board Size	Weight Per Sheet (Kg)	Pieces per Pallet
6 x 1220 x 1200mm	9.2	113
12 x 1200 x 800mm	12.1	76

9.0 Further Contact Information

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