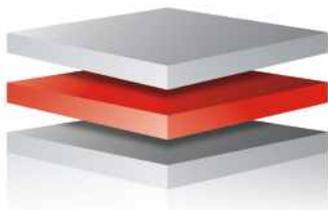
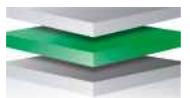


**E~~X~~LINE-R**

**DECORATIVE FINISH SUBSTRATE PANELS** INSTALLATION MANUAL



**MULTI**BOARD  
www.multiboard.com.au



**MULTI**BOARD  
MGO  
PERFORMANCE  
WALLS

**E~~X~~TERNAL E~~X~~CELLENCE**

## PRODUCT DESCRIPTION

**eXLine-R** is a versatile, glass fibre-reinforced recycled wood fibre and magnesium cement based panel designed for external cladding.

Fabricated from a combination of recycled timber materials (50%), mineral fibres and the latest fire retardant chemicals, **eXLine-R** is a lightweight but exceptionally strong board that provides a solid substrate for applied decorative finishes.

## DECORATIVE FINISHES - PAINTING

All exposed edges, including the board's front face, are to be sealed with an appropriate paint system, e.g. Haymes Paints - Multiboard, to ensure weatherproofing.

## PRODUCT APPLICATIONS

**eXLine-R** can be used in a number of areas within the construction of residential and commercial buildings externally in most applications.

The **eXLine-R** substrate system combined with a recommended proprietary jointing and coating system, is suitable as wall cladding for new homes, re-cladding of existing homes, extensions, upper storey additions and in light commercial applications with concealed joints.

## PRODUCT INFORMATION

### Compliance with AS2908.2

**eXLine-R** sheets conform to the requirements of AS/NZS2908.2: Cellulose-Cement Products Part 2: Flat Sheets.

**eXLine-R** products are classified Type A, Category 3, in accordance with AS2908.2 'Cellulose-Cement Products'.

### Appearance

**eXLine-R** has a textured glass fibre-reinforced face and edges. Rebated edge along all four sides.

### Edge Details

Recessed Edge

## Mass and Dimensions

**eXLine-R** is available in the following lengths:

EXLINE-R				
Width (mm)	Length (mm)	Thickness (mm)	Approx Weight (kg/m <sup>2</sup> )	Weight (kg)
1100	2400	10	11.0	29.04kg
	2700			32.67kg
	3000			36.30kg
Square Edge Soffit Application				
1200	2400	9	9.9	28.51kg
	2700			32.08kg
	3000			35.64kg

**eXLine-R** is dimensionally stable, allowing it to be an excellent external cladding panel.

The manufacturing tolerances for **eXLine-R** are as follows:

- Width (+/- 01.5mm)
- Length (+/- 01.5mm)
- Thickness (+/- 0.25mm)

### Fire Resistance

**eXLine-R** is classified as non-combustible and has been tested in accordance with AS1530.1.

When tested in accordance with AS1530.3, the Early Fire Hazard Indices are as follows:

Ignitability Index	0	Range 0-20
Spread of Flame Index	0	Range 0-10
Heat Evolved Index	0	Range 0-10
Smoke Developed Index	0-1	Range 0-10

**eXLine-R** was tested to AS 3837 and found to have a Group 1 classification and average specific extinction area >0.1m<sup>2</sup>/kg.

## MULTIBOARD PROPERTIES

**eXLine-R** outperforms other building boards in many important ways including the following:

<b>Moisture Resistant</b>		Tested to ASTM E 514-03 Standard test Method for Water Penetration & Leakage through Masonry.
<b>Termite Resistant</b>		Laboratory tested by Termimesh Australia.
<b>Ease of Use and Installation</b>		Normal woodworking equipment required to cut and shape.
<b>Fire Resistant</b>		Non combustible. Tested to AS 1530.1.
<b>Strength / Impact Resistance</b>		Tested to the strict requirements of AS2908.2.
<b>Lightweight</b>		Over 30% lighter than traditional cement sheeting.

## 100% Safe to Use



No harmful crystalline silica or asbestos is used in its composition. Tested as safe.

## Acoustic Requirements



High acoustic performance.

## Environmentally Friendly



50% recycled bamboo / wood fibre, 40% less embodied energy to produce than fibre cement.

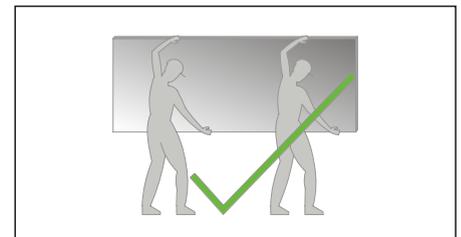
## HANDLING & STORAGE

**eXLine-R** should be kept dry, and be stored in a dry and covered area.

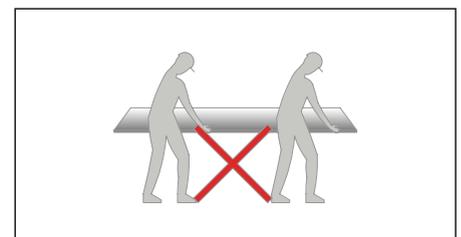
If stored externally, **eXLine-R** must be stacked flat, be stacked above the ground, supported on level ground and must be protected from the weather.

Care should be taken to avoid damage to the products edges, ends and surfaces. If the product becomes wet, the product must be allowed to dry before fixing.

**eXLine-R** should be stacked and handled carefully to avoid damage.



**Boards should be lifted from the pallet by sliding sideways and carried on its long edges. Individual boards should be stacked and handled carefully to avoid damage.**

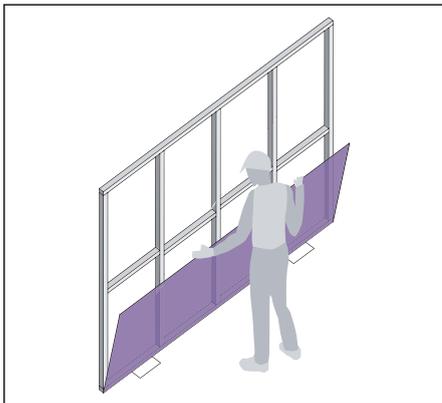


## SHEET CUTTING

Smooth Cutting	
	For smooth cuts, use a circular saw.
Sawing and Planing	
	eXLine-R can also be cut easily using a normal hand saw.
	The edge of eXLine-R can be planed or smoothed with an electric planer, rasp or file, or conventional papers if sanding is required.
Drilling	
	For making holes in the board, use a standard drill tip. Do not use hammer action.

## Fixing

Direct fixing to the frame structure requires Multiboard eXLine-R products to be joined over framing studs, noggings and to be supported by the top/bottom plate.



Multiboard recommends the use of 42mm (min) seasoned treated pine timber battens or 50mm (min) light gauge steel top hats be installed which allows for the system layout to be independent of the wall frame. This installation method provides greater installation and thermal performance efficiency.

The eXLine-R joints should be butt jointed together, except where movement joints are required.

It is a requirement that all sheets are installed horizontally, vertical joints are staggered and the sheet is screw fixed at a maximum of 200mm centres.

**In all applications, control joints are required at 4.8m intervals.**

Do not place fixings closer than 15mm from sheet edges, or closer than 100mm from the eXLine-R sheet corners.

The sheet must be held firmly against the framing when fixing to ensure breakout does not occur at the back. Fixing is recommended from the centre of the sheet and work outwards, to ensure sheets are hard against the frame, to avoid drumminess.

## Fasteners

When fastening eXLine-R products, we recommend that you use fasteners - timber screws STF 40-8 C4 or metal screws SMF 30-8 C4

Multiboard recommend at least Class 3 grade fasteners be used of the same gauge and length. You must countersink all screw holes and allow a clearance of 1mm over the diameter of the fasteners. When countersinking fasteners, the depth must be controlled by a gauge to restrict the head depth to no more than 1mm (approx.) below the face of the board.

Fasteners must have the appropriate level of durability for the intended use, particularly in areas subject to salt spray, such as coastal areas.

Spacing (mm)	Location (mm)	Wind Classification to AS 4055					
		N1	N2	N3	N4	N5	N6
Fastener Spacing	Within 1200 of building edge	200	200	200	200	200	200
	Elsewhere	200	200	200	200	200	200

As a guide to the classification please refer to the following table:

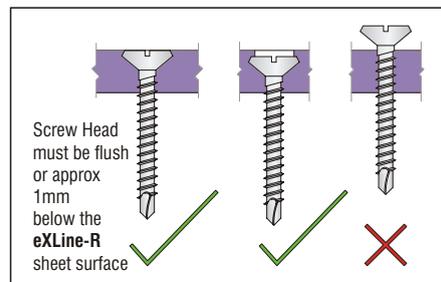
Environmental Classification	Appropriate Fastener (Screw)
> 400m from ocean or from severe marine influence.	AS 3566 Class 3
Severe marine influence and up to 400m from marine environment.	AS 3566 Class 4 - Stainless Steel.

Two types of stainless steel fasteners are available for use in these areas.

**Timber Fixing** self drilling STF 40-8 C4 8g

**Metal Fixing** self drilling SMF 30-8 C4 8g

Fasteners must not be overdriven, as this can reduce the holding capacity of the sheet.



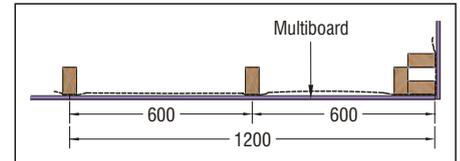
## SHEET LAYOUT & INSTALLATION

Planning the sheet layout is very important, as this minimises wastage and also the number of sheet joints required.

## Orientation

eXLine-R sheets must be installed horizontally, vertical joints to be staggered and always commence the first sheet from a corner.

A horizontal, staggered sheet installation of eXLine-R facilitates maximum bracing strength across the wall installation. Material wastage is minimised when the stud spacing is 600mm wide, although 450mm centres would provide a higher impact resistance.



**Vertical sheet layout is not recommended.**

## FRAMING

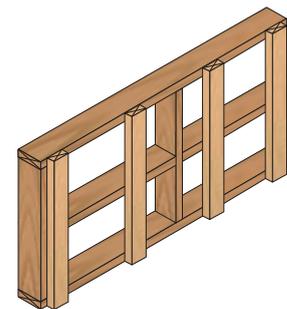
### General

eXLine-R is suitable for use with both timber and lightweight steel framing.

- Framing must be constructed to comply with the relevant building regulations and standards.
- The framing must be set to a true plane to ensure a straight finish to the wall.
- Studs must be spaced at a maximum of 600mm centres.
- Noggings must be spaced at a maximum of 1100mm centres for horizontal sheet layout (sheet widths are a maximum of 1100mm).
- eXLine-R sheet edges **MUST** be supported by studs, noggings, top/bottom plates when direct fixed to frame structure.

### Batten Fix Example

**Position the batten** according to predetermined and marked spacing's and ensure that they are vertical (check this with a spirit level in all planes).



**Fix the battens** on the flat to the frame using appropriate framing nails or screws.

Always check the alignment of all framing with a long straight edge before any installation is conducted. The maximum out of alignment should not exceed 4mm over 3000mm, 3mm over 1200mm or 2mm over 600mm. This should be checked both horizontally and vertically.

Excessive misaligned framing may contribute to an uneven surface after the coating has been applied. Multiboard will not be held responsible for this should it occur.

*Please note: fixing to uneven surfaces or water saturated framing will void any warranty.*

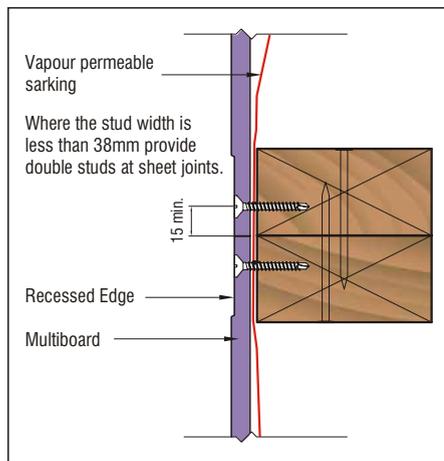
## Timber Framing

Timber framing must comply with AS1684.2 and 3: 1999 Residential Timber - Framed Construction.

**eXLine-R** cannot be fixed to wet framing. Kiln dried timber/seasoned timber must be used. If sheets are fixed to wet framing, it is likely that problems will occur at a later date due to excessive timber shrinkage. Please note all warranties will be void if this is the case.

Unseasoned timber must not be used as it is prone to shrinkage, and can cause undue stresses on sheet joints due to excessive movement between the timber frame and the sheets.

The timber framing thickness at the sheet joints must be a minimum of 42mm. A double stud at the sheet joint must be provided, if the timber framing is less than 42mm.



## Steel Framing

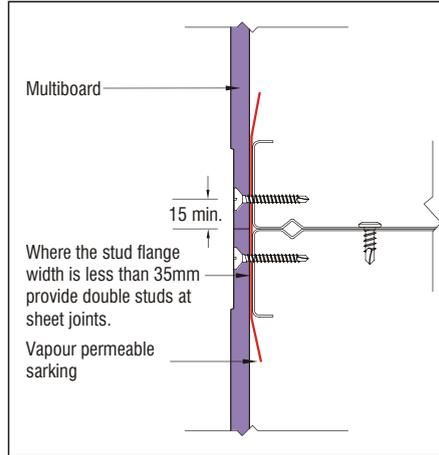
Metal framing must comply with AS3623 - 1993 Domestic Steel Framing.

**eXLine-R** can be fixed directly to lightweight metal framing, of thickness between 0.5mm and 1.6mm (BMT).

Minimum flange width at the joints must be 35mm, to provide adequate support for the fixing of the sheet edges. A double stud at the sheet joint must be provided if the steel framing is less than 35mm.

**eXLine-R** sheets **must not** be fixed directly to drawn steel or hot-rolled steel sections. If Multiboard is to be installed on these members, then either 42mm (min) wide timber battens must be used or 50mm (min) wide light-gauge metal top-hats must be used.

All timber battens or metal top-hats must be installed vertically, at a maximum of 600mm centres. Reduced stud centres will provide a higher impact resistance, but will require extra studs to be placed at board junctions.



## Frame Layout

Framing studs must be spaced at maximum centres of 600mm.

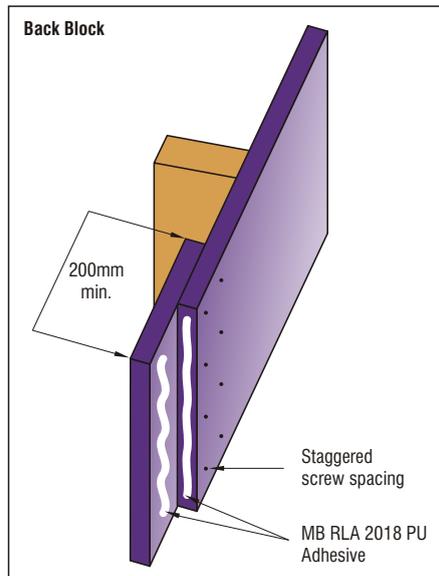
Noggings are required to be installed flush with the outside face of the studs at 1100mm centres for 1100mm wide sheets.

In higher wind areas, stud spacings must be reduced (Refer to table below).

All sheet edges must be supported by studs or noggings. Additional framing must be installed when framing does not coincide with the joints. Alternatively joints can be back blocked using a 200mm section of Multiboard glued and screwed behind the sheet edges to provide support across the join. Sika Super Grip construction adhesive recommended or similar.

## Maximum Stud Spacing - 9mm & 10mm eXLine-R

Spacing (mm)	Location (mm)	Wind Classification to AS 4055					
		N1	N2	N3	N4	N5	N6
Stud Spacing	Within 1200 of building edge	600	600	600	450	300	300
	Elsewhere	600	600	600	600	450	450



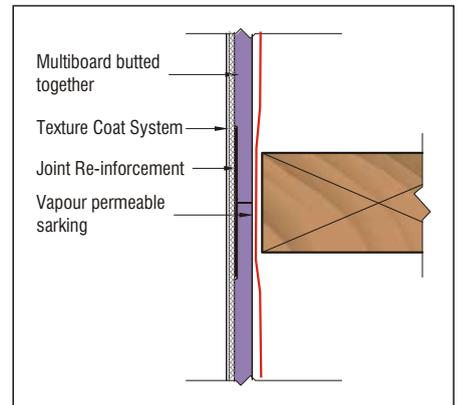
## Joints

**eXLine-R** joints are butt jointed to form the set (recessed-edge) joint. No gaps are to be left between sheets. The success of any joining system is very much dependant upon the correct construction of the framing, the fixing of **eXLine-R** and the application of the jointing materials.

## Sarking

Vapour permeable sarking between **eXLine-R** and the framing must be installed at all times. All warranties are void without the installation of sarking.

Use of reflective sarking will enhance the insulation properties of the cladding system.

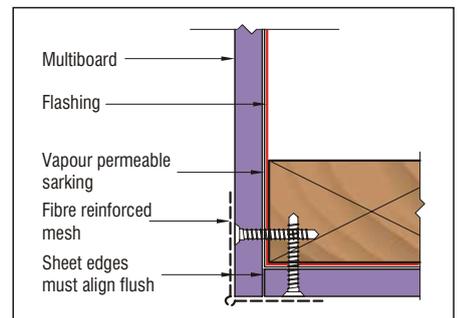


All wall openings, penetrations, intersections, connections, window sills, heads and jambs **must** be fully flashed and waterproofed, before any **eXLine-R** sheets are installed.

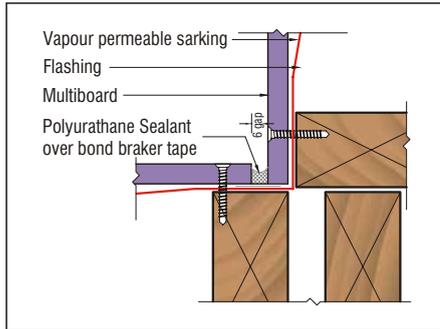
## Corners

At external corners, the sheet joint must finish flush - no gap should be left in these circumstances. Sheets at the corners should either be both recessed or both straight edge.

Multiboard recommends alkaline-resistance fibreglass corner mesh to be installed at the corner before the coating system is applied. Please refer to the coating manufacture's recommendations before application.



On an internal corner it is necessary to leave a 3mm - 6mm gap, which should be filled with polyurethane sealant.

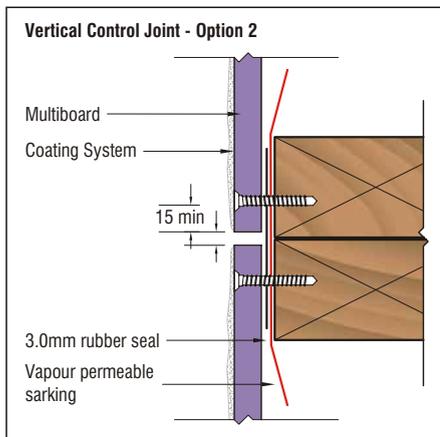
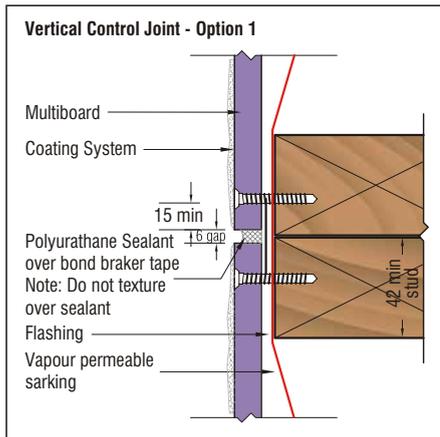


### Control Joints

#### Vertical Control Joints

Control joints are required when a continuous wall spans longer than 6000mm. Relief and control gaps require a 6mm gap between sheets and are best incorporated in the structure at window and door opening or behind where a nearby downpipe is located.

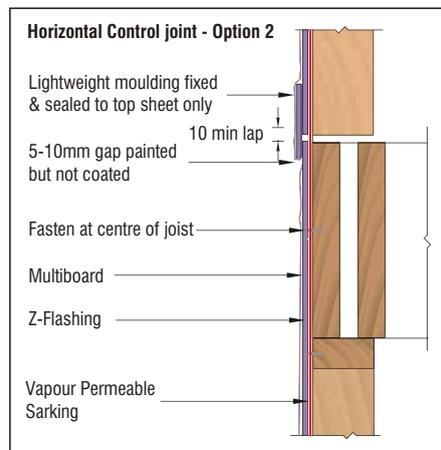
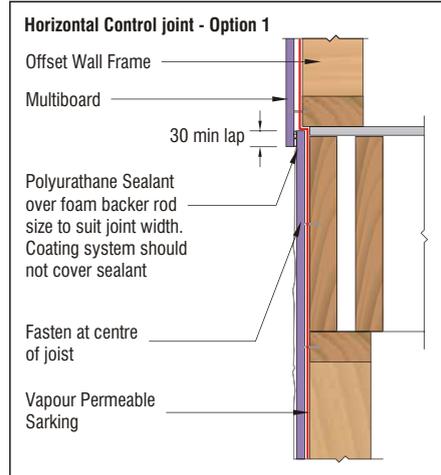
When control joints are required form a 6mm gap between the **eXLine-R** sheets and fill with polyurethane sealant.



#### Horizontal Control Joints

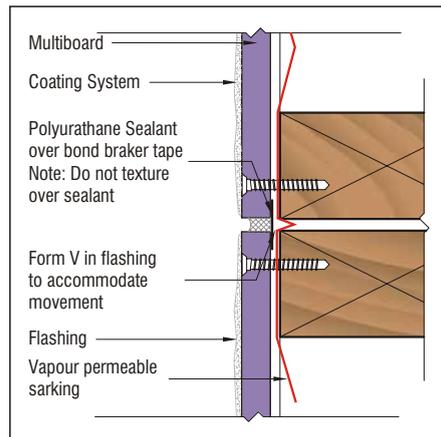
Horizontal control joints are located at 3.0m maximum and also in between floor joist levels and at gable ends.

This allows for sheet and frame movement.



#### Structural Joints

Structural joints must be provided when required by the architect/designer. Structural joints must have total separation, including top/bottom plate, internal lining and **eXLine-R**, to allow for expansion and contraction of the structural framing.



#### Construction Joints

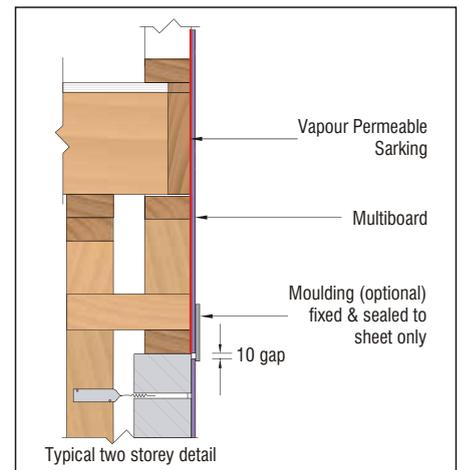
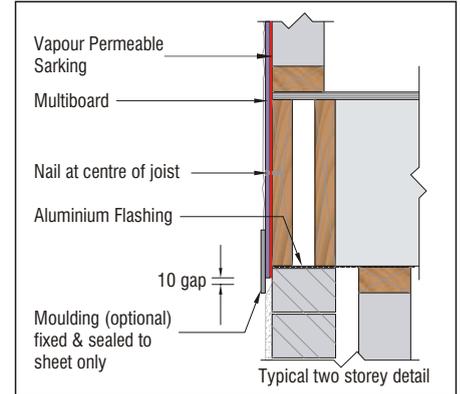
##### Vertical

Vertical construction joints are required when **eXLine-R** is installed alongside an existing structure.

Always leave a 6mm gap between the two construction types and fill with polyurethane.

##### Horizontal

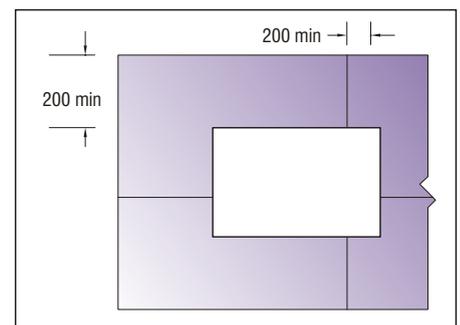
Horizontal construction joints are required where upper levels are constructed on an existing ground floor structure.



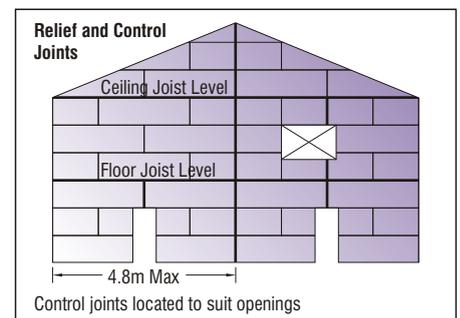
#### Window & Door Openings

To reduce the incidence of cracks appearing in the jointing, **eXLine-R** sheets should be cut in (200mm minimum) around window and door openings.

Where cutting in of **eXLine-R** panels around openings is not possible (eg windows & doors), the use of control joints at the opening junctions is highly recommended. This will minimise the potential for any cracking.



If a sheet must coincide with the corner of an opening, **eXLine-R** recommends installation of a relief/control joint.



## Cold Climates

**eXLine-R** is not designed to be in contact with snow for long periods of time. **eXLine-R** is not recommended for conditions of freeze/thaw.

Multiboard has been tested for resistance to frost in accordance with AS/NZS 2908.2 Clause 8.2.3.

## Termite Protection

**eXLine-R** is termite resistant and will not be affected by this pest. Consideration must be made for selection of sub-frame and the possibility of termite ingress through other areas of the building construction

There are many ways for managing termite entry to buildings and selecting the appropriate method depends on various risk factors and the form of construction.

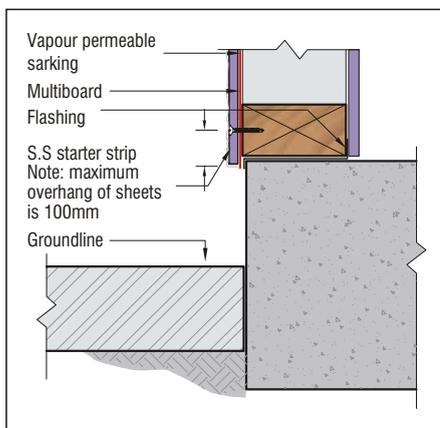
Further details can be obtained from the BCA, AS3660 or local building authorities.

## Ground Clearance & Slab on Ground

When **eXLine-R** is installed as an external cladding on the ground floor, a 150mm minimum clearance must be provided between the earth on the exterior and **eXLine-R**.

Paved areas, such as driveways, paths steps etc., require a 50mm min clearance.

**eXLine-R** must overlap slab on ground and/or footings by a maximum overhang of 100mm.



## JOINT & COATING SYSTEMS

Proprietary joint/coating systems applied to **eXLine-R** must be able to withstand the stresses across the joints. Therefore the most suitable coating systems for **eXLine-R** are 100% acrylic based or elastomeric high-build texture coatings.

A number of joint/coating systems have been developed by a number of painting and rendering manufacturers which would be suitable for **eXLine-R**. All application systems must be chosen from reputable system providers such as Euroset, Rockcoat, Dulux Taubmans and Watyil.

The joint and coating system must be applied by experienced applicators, as suggested by the joint and coating manufacturer.

Any sand based rendering systems must use ionised sand bases.

The selected joint and coating system must be applied to dry, clean sheet only. Application must be

completed within 2 months of the sheets being fixed on site.

Multiboard strongly recommends that dark colours be avoided, as they may cause high temperature variations within the substrate and lead to excessive thermal movement.

Heavier texture coatings are preferred over smoother finishes, as any minor surface imperfections are less likely to become apparent in critical lighting conditions.

It is the applicator's responsibility to use the appropriate compounds in the coating system sufficient to eliminate cracking of the joints under normal building settlement conditions.

The **eXLine-R** system requires as a minimum that the following be met for the coating system:

- Fill joint with a polymer modified acrylic render (patch)
- Install a 100mm wide alkaline-resistant 5mm weave fibre-glass mesh (160g/m<sup>2</sup>).
- Apply a 2nd layer of polymer modified acrylic render (patch) in the joint whilst 1st layer of patch is still wet.
- Render entire board surface with polymer modified acrylic render (patch) Quikcote Flexipatch/ Quikcote Wet Patch, or similar, at a minimum of 2mm thick. Ensure the entire surface is level (taking into account the joint). Make sure that the joint is not proud of the remaining surface. Apply another layer of fibreglass mesh across the entire **eXLine-R** sheet. The mesh is to be trowelled into the surface of the wet render, positioned just below the surface. Under no circumstances should the mesh be fixed to the walls and render applied over it. Overlap all fibreglass mesh sheets a minimum of 50mm. Apply a second coat if the outline of the joint and fixings is not eliminated.
- Apply trowel-on texture/colour to entire surface.
- Apply one or two coats of an elastomeric membrane.

*Please note: all coatings must be applied and maintained in accordance with the coating manufacturer's instructions.*

## HEALTH & SAFETY

**eXLine-R** is manufactured from woven glass fibre, recycled wood fibres (50%), magnesium cement, and additives which catalyse the cementing action. As manufactured, the product will not release airborne dust, however during drilling, and sanding operations glass fibres and fine dust may be released.

When using power saws in a confined space, dust extraction equipment is recommended to control dust levels. If power tools are used externally, wear an approved P1 or P2 dust mask, respirator and safety glasses.

No special safety precautions are necessary when handling or working with **eXLine-R**.

For further information refer to the **eXLine-R** Materials Safety Data Sheet, please refer to our website.

## WARRANTY

**eXLine-R** (Multiboard) warrants for a period of ten (10) years ("the warranty period") from the date of purchase that all **eXLine-R** products ("the product") will be free from defects due to faulty manufacture or materials, and will be resistant to cracking, rotting, fire and damage to the extent set out in Multiboard's published literature current at the time of installation, and strictly subject to

the conditions set out below.

Nothing in this document shall exclude or modify any legal rights of any person under the Trade Practices Act or otherwise which cannot be excluded or modified at law.

## Conditions of Warranty:

The Warranty is strictly subject to the following conditions:-

1. The product, and any other products including fasteners and joining systems, applied to or used in conjunction with the product must be used and installed strictly in accordance with the recommended installation methods at the time of installation.
2. Under no circumstances will Multiboard be liable for defects arising from:-
  - (a) A failure to use and/or install the product, or any products, strictly in accordance with the product manual.
  - (b) Defective materials not supplied by Multiboard; or
  - (c) Impact.
3. Multiboard will not be liable for breach of Warranty, and no breach of Warranty claim will be accepted, unless the Claimant makes a written claim and provides proof of purchase within 30 days of the alleged defect becoming apparent.
4. This Warranty is not transferable under any circumstances without the prior written consent of Multiboard.
5. A Claimant's sole remedy for breach of Warranty is (at Multiboard's option) that Multiboard will either replace or repair the defect, supply replacement product, or pay for the cost of replacement or rectification of the affected product.
6. Under no circumstances shall Multiboard be liable for any consequential loss, property damage or personal injury, economic loss or loss of profits, arising in Contract or negligence or howsoever arising. Without limiting the foregoing, Multiboard will not be liable for any claims, damages or defects arising from or in any way attributable to poor or defective workmanship, defective materials or poor design or detailing, settlement or structural movement and/or movement or materials to which the product is attached, incorrect design of the structure, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, normal wear and tear, or growth of any organism on any product surface.
7. The express warranties set out above are in lieu of all other representations, warranties or conditions, express or implied including but not limited to implied warranties or conditions of merchantable quality and fitness for a particular purpose, and those arising by statute or otherwise in law or from a course of dealing or use of trade and which are excluded to the fullest extent permitted by law.

