

## 4711M MAMMOTH THERMAL INSULATION

### 1. GENERAL

*If you have pre-customised this work section using the "questions and answers" provided as part of the downloading process, it may be necessary to amend some clauses to suit the final project-specific version.*

*The section must still be checked and customised to suit the project being specified, by removing any other irrelevant details and adding project-specific details and selections.*

This section relates to **Mammoth™** insulation installed, laid, hung or fitted as thermal insulation.

It includes;

- Mammoth™ Wall Insulation
- Mammoth™ Underfloor Insulation
- Mammoth™ Ceiling Insulation
- Mammoth™ Skillion Roof Insulation
- Mammoth™ Carpark Panel Insulation
- Mammoth™ Thermal Break Insulation

*Modify or extend the above description to suit the project being specified.*

*NZS 4218 and NZS 4243.1 provide a schedule, a calculation and a modelling method for determining insulation to meet NZBC H1. Ensure SELECTIONS reflect the project requirements.*

### 1.1 RELATED WORK

Refer to 4721M MAMMOTH ACOUSTIC INSULATION for acoustic insulation.

Refer to 4161 UNDERLAYS, FOIL AND DPC for wall underlays, roofing underlays, foils and films.

*Include cross references to other sections where these contain related work.*

*Refer to roofing sections for roofing underlays.*

### Documents

### 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

|                  |   |
|------------------|---|
| NZBC C/AS1-AS6   | Protection from fire  |
| NZBC C/VM2       | Protection from fire  |
| NZBC H1/AS1      | Energy efficiency   |
| AS/NZS 3000      | Electrical installations  |
| NZS 4218:2004    | Energy efficiency - Small building envelope   |
| NZS 4220         | Code of practice for energy conservation in non-residential buildings   |
| NZS 4243.1       | Energy efficiency - Large buildings - Building thermal envelope   |
| NZS 4246         | Energy efficiency - Installing insulation in residential buildings  |
| AS/NZS 4859.1    | Materials for the thermal insulation of buildings - General criteria and technical provisions                   |
| AS/NZS 60598.2.2 | Luminaires- Particular Requirements - Recessed luminaires   |
| ASTM C518        | Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus |

*NZS 4218:2004 Energy Efficiency - Small Building Envelope, is recognised by NZBC, NZS 4218:2009 Thermal Insulation - Housing and Small Buildings, has not at the time of writing been recognised by NZBC. Consult with the BCA as to their requirements.*

*Delete from the DOCUMENTS clause any document not cited. List any additional cited documents. The following are related documents and if referred to in the work section need to be added to the list of DOCUMENTS.*

|                   |  |
|-------------------|--|
| NZBC H1/VM1       | Energy efficiency  |
| NZS 4214          | Methods of determining the total thermal resistance of parts of buildings.   |
| NZS 3602          | Timber and wood-based products for use in building   |
| SNZ/PAS 4244      | Insulation of lightweight-framed and solid-timber houses   |
| AS/NZS 4389       | Safety Mesh  |
| AS/NZS 4534       | Zinc and zinc/aluminium-alloy coatings on steel wire   |
| AS/NZS 60695.11.5 | Fire hazard testing - Test flames - Needle-flame test method - Apparatus, conformity test arrangement and guidance |
| BRANZ BU 427      | Improving thermal insulation   |
| BRANZ BU 429      | Calculating R-values for timber framed buildings   |

BRANZ BU 519 Fasteners selection  
BRANZ BU 460 Internal moisture control  
BRANZ BU 461 Practical sound control  
BRANZ BU 539 Recessed downlights  
BRANZ publication House insulation guide

### 1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:

Mammoth Brochure: Mammoth feel the warmth  
Mammoth Product Data Sheet: Mammoth Wall Insulation  
Mammoth Ceiling Blankets  
Mammoth Underfloor Insulation  
Mammoth Skillion Roof Insulation  
Mammoth Friction Fitted Airlay Insulation  
Mammoth Carpark Panel Data Sheet  
Mammoth Thermal Break Data Sheet

[BRANZ Appraisal 802](#) - Mammoth™ Underfloor Insulation  
[BRANZ Appraisal 797](#) - Mammoth™ Insulation

Living Building Challenge: Declare Program - Red List Free Declaration Status for Mammoth insulation

Manufacturer/supplier contact details

Company: **InsulPro Manufacturing Limited**  
Web: [www.mammoth.co.nz](http://www.mammoth.co.nz)  
Email: [info@mammoth.co.nz](mailto:info@mammoth.co.nz)  
Telephone: 0800 MAMMOTH (626 668)  
Facsimile: 09 273 2309

*It is important to ensure that all personnel on site have access to accurate, up to date technical information on the many products, materials and equipment used on a project. In most cases individual products are not used in isolation, but form part of a building process. Also a particular manufacturer's and/or supplier's requirements for handling, storage, preparation, installation, finishing and protection of their product can vary from what might be considered the norm. Access to technical information can help overcome this potential problem.*

*Mammoth is manufactured by InsulPro Manufacturing Ltd – a carboNZero certified organisation.*

### Warranties

#### 1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

50 years: For materials

- Provide this warranty on the manufacturer/supplier standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

*Modify or expand the clause to suit project or manufacturer/supplier requirements, options include:*

- *Change the standard form to be used (check with the manufacturer/supplier, use the general section 1237WA WARRANTY AGREEMENT if required)*
- *Commence the warranty from the date of purchase (check with the manufacturer/supplier)*

#### 1.5 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

5 years For execution

- Provide this warranty on the installer/applicator standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

*Modify or expand the clause to suit project or installer/applicator requirements, options include:*

- *Change the standard form to be used (check with the installer/applicator, use the general section 1237WA WARRANTY AGREEMENT if required)*
- *Commence the warranty from the date of installation (check with the installer/applicator)*

## Requirements

- 1.6 QUALIFICATIONS  
Work to be carried out by tradesmen experienced, competent and familiar with the Mammoth™ insulation materials and techniques specified.
- 1.7 NO SUBSTITUTIONS  
Substitutions are not permitted to any specified Mammoth™ insulation, associated products, components or accessories.

## Performance

- 1.8 FIRE GROUP NUMBERS - UNFINISHED PANEL  
The Group Number Classification to [NZBC C/AS1-AS6](#), Table 4.1, has been determined in accordance with [NZBC C/VM2 Appendix A](#), following testing ISO 9705. Refer to Mammoth™ Data Sheets for fire performance results.

Group number:

|                                   |               |
|-----------------------------------|---------------|
| Product:                          | Group number: |
| Mammoth™ Carpark Panel Insulation | 1S            |

*Delete clause if not required. A Group Number may not be required in situations such as, the surface area is less than 5m<sup>2</sup> (NZBC C/AS2-AS7, 4.17.6.a), or the design is to NZBC C/AS1 risk group SH (houses etc).*

*Consult with the project Fire Consultant and/or the Services Engineer if necessary.*

## 2. PRODUCTS

### Materials

*NOTE: When insulation abutting or covering recessed downlights is intended to be in contact with IC, CA 80, CA 135 luminaries the insulation must withstand a 30s Needle Flame test to AS/NZS 60695.11.5. Mammoth insulation meets this requirement.*

- 2.1 MAMMOTH™ SECTIONS - AIRLAY, FRICTION FIT  
**Mammoth™** airway sections to [AS/NZS 4859.1](#), [NZS 4218](#), [NZS 4243.1](#), and [NZS 4220](#). 100% white, non woven polyester fibres thermally bonded to produce self supporting and friction fitted insulation sections. Machine slit to the required width and cut to length. Refer to SELECTIONS for location, type, R Value and thickness.  
*For walls, underfloor and skillion roof insulation. Underfloor sections come in medium density or high density airway insulation sections.*
- 2.2 MAMMOTH™ SECTIONS  
**Mammoth™** sections to [AS/NZS 4859.1](#), [NZS 4218](#), [NZS 4243.1](#) and [NZS 4220](#). 100% white semi-rigid polyester fibres thermally bonded to produce insulation pads. Refer to SELECTIONS for location, type, R-Value and thickness.  
*For wall insulation.*
- 2.3 MAMMOTH™ BLANKETS  
**Mammoth™** blanket rolls to [AS/NZS 4859.1](#), [NZS 4218](#), [NZS 4243.1](#) and [NZS 4220](#). 100% white non woven lofted polyester fibres thermally bonded to produce insulation blankets. Refer to SELECTIONS for location, type, R-Value and thickness.  
*For ceiling, wall and underfloor insulation.*
- 2.4 MAMMOTH™ CARPARK PANEL  
**Mammoth™ Carpark Panel**, friction fit airway panels to ASTM C518. 100% non woven, medium density polyester fibres, thermally bonded to produce insulation panels. Machine slit to a standard width and cut to length. Refer to SELECTIONS for location, type, R-value and thickness.  
*The panels are designed to improve thermal performance of carpark ceilings for residential and commercial buildings. Prevents air movement between the insulation panel and the substrate.*
- 2.5 MAMMOTH™ THERMAL BREAK SHEETS  
**Mammoth™ Thermal Break**, airway sheets to ASTM C518. 100% non woven polyester fibres, thermally bonded to produce high density insulation sheets. Machine slit to a standard width and cut to length. Refer to SELECTIONS for location, type, R-value and thickness.

*Designed to provide thermal separation between steel framing and external cladding in steel frame construction. In addition to preventing condensation on steel frame elements. Mammoth™ Thermal Break will also contribute to the overall thermal performance of the walls. Can be on site or factory installed.*

### **Components**

- 2.6 **FASTENERS**  
Insulation anchors complete with retained washer. 25mm general purpose polyester webbing, 1500kg breaking strain.
- 2.7 **TAPES**  
Proprietary plastic strapping tape, stapled across framing to retain insulation in unlined wall and ceiling locations.
- 2.8 **ADHESIVES**  
Solvent based contact adhesive.
- 2.9 **ADHESIVE TAPE**  
Pressure sensitive adhesive tape.  
*Note: Ensure concrete is dust free before applying tape.*

### **Accessories**

- 2.10 **WIRE NETTING**  
Refer to 4161 UNDERLAYS, FOIL AND DPC for wire netting used to support the insulation.  
*Use only to support roofing underlays that are not self-supporting, particularly for roofs under 8%.*

## **3. EXECUTION**

### **Conditions**

- 3.1 **DELIVERY**  
Keep Mammoth insulation dry in transit. Take delivery of insulation dry and undamaged and store in a location that protects them from the weather and damage. Reject all damaged materials.
- 3.2 **STORAGE**  
Ensure storage areas are away from current work areas. Cover to keep dry until fixed. Insulation must not become wet. Avoid distortion, stretching, puncturing and damage to insulation and packaging.
- 3.3 **HANDLING**  
Wear protective clothing as necessary and when handling, avoid delamination or distortion of the product.
- 3.4 **INSPECTION**  
Install when the building is enclosed and when the construction materials have achieved the maximum permitted moisture content or less. Before starting installation of Mammoth Insulation, check the cavities are not interconnected and that mesh, wall and roofing underlays and vapour barriers are in place.

### **Application - general**

*AS/NZS 60695.2.2, NZ-only Amendment A, introduces the new classifications of recessed luminaires (downlights). The new classification determines what types of recessed luminaires can be used in residential installations and whether they require a clearance to insulation. The luminaires must have their respective class permanently marked on the fitting. Mammoth™ polyester insulation meets the performance standards for insulation, including the Needle Flame test to AS/NZS 60695.11.5.*

- 3.5 **INSTALL INSULATION - GENERAL**  
Lay, install, fit and fix to [NZBC H1/AS1: Energy efficiency, 2.0 Building thermal envelope](#), and to manufacturer's requirements. Install in housing to [NZS 4218](#) and [NZS 4246](#).

Install in large buildings to [NZS 4243.1](#) and [NZS 4220](#). Allow insulation to re-loft/relax prior to installation. Do not cover vents. Allow a clearance around metal flues and chimneys to [NZS 4246](#) and as recommended by the fireplace manufacturer. Where possible do not cover electrical wires. Do not cover lighting transformers/controllers and leave appropriate clearance. Refer to manufacturer's installation instructions for further details.

*These standards give minimum building element thermal resistance (R-values). Achieving these will depend on the quality of the installation and other factors.*

*CAUTION: Electrical cables and equipment partially or completely surrounded with bulk thermal insulation may overheat and fail. For example this applies to wiring installed prior to 1989.*

### 3.6 RECESSED LIGHT FITTINGS - CLEARANCE

Non-residential applications;

The clearance between insulation and recessed downlights

- 100mm gap to [AS/NZS 3000](#), figure 4.9.
- Provide larger clearance where required by the light manufacturer.

Residential applications;

- Ensure new recessed downlights are one of the new classes classified in [AS/NZS 60598.2.2](#); CA 80, CA 135, IC and IC - F
- Classification type CA 80, CA 135, to [AS/NZS 60598.2.2](#); insulation can abut the sides
- Classification type IC and IC - F, to [AS/NZS 60598.2.2](#); insulation can abut and cover over the top of the downlight
- Classification type NON IC to [AS/NZS 60598.2.2](#); insulation cannot abut or cover the downlight. This class of downlights is banned from residential applications.
- Provide larger clearances where required by the light manufacturer.
- In a retrofit situation where recessed downlights are unclassified or unknown, ensure 100mm clearance from the downlight to insulation to [AS/NZS 3000](#), figure 4.9.

*Insulation abutting or covering recessed luminaires (downlights) must pass the needle flame test to [AS/NZS 60695.11.5](#).*

*NZBC C/AS3 - C/AS7 dictate that non-residential installations must have 100mm clearance.*

### 3.7 CHECK FOILS

Ensure foils are dry, clean, undamaged and free of debris before being covered.

### 3.8 CHECK UNDERLAYS

Ensure these are dry, clean, undamaged and free of debris before being covered.

### 3.9 CHECK VAPOUR BARRIERS

Ensure these form one homogeneous sheet vapour barrier and remain as such throughout the ensuing construction process.

#### **Application - underfloor**

### 3.10 FIT MAMMOTH MULTI UNDERFLOOR SECTIONS - MEDIUM DENSITY

Friction fit **Mammoth™ Multi Underfloor** medium density, airway sections between floor joists and butt joints tightly to ensure there are no gaps. It can be compressed up to 35mm to fill the cavity and provide a firm, friction fit. Use an appropriate sharp craft knife, with replaceable blades or a specialised insulation saw to cut to required width. In most cases Mammoth™ Multi Underfloor Sections do not require mechanical fixings.

### 3.11 FIT MAMMOTH NOVAFLOOR SECTIONS - HIGH DENSITY

Friction fit **Mammoth™ NOVAfloor** high density, airway sections between floor joists and fold excess width down on the joist on one side. Butt joints tightly to ensure there are no gaps. Use an appropriate sharp craft knife, with replaceable blades or a specialised insulation saw to cut to required width. Mammoth™ NOVAfloor Sections do not require mechanical fixings. Refer to manufacturer's instructions for further details.

### 3.12 FIT MAMMOTH UNDERFLOOR BLANKET

Fit **Mammoth™ Underfloor Blanket** between the floor joists and staple blanket to each side of the joists. In coastal areas use stainless steel staples to avoid corrosion. Make sure that the blanket is hard up against the underside of the floor and does not sag. Slightly oversize the width to ensure a fold down on each joist. Tear by hand to required

length. Tear to smaller pieces for smaller spaces and around penetrations. Leave no gaps, other than around downpipes, and maintain full thickness over the whole of the installation. Refer to manufacturer's instructions for further details.

### Application - walls

- 3.13 FIT MAMMOTH BLANKET/SECTIONS - TIMBER FRAMING  
Friction fit **Mammoth™ Wall** between framing members and linings, or fit over framing members and butt tightly to reduce heat loss through gaps. Cut/ rip on site to fill cavity and provide a quality even fit. Tear to smaller pieces for smaller spaces and around penetrations to achieve designed thermal performance. Do not fold, tuck or compress the insulation.
- 3.14 FIT MAMMOTH SECTIONS - STEEL FRAMING  
Ensure the product supplied is of the right length for steel frames. Friction fit **Mammoth™ Wall** inside the steel studs and cut on site to fit around diagonal bracing elements. Fill cavity and provide a close even fit. Do not fold, tuck or compress the insulation as much as possible. Insulation will be compressed down to 76mm at the point of entry to the C channel (stud) – this is due to 8mm flange on either side of the C channel. Cut smaller pieces for smaller spaces and around penetrations for a snug fit.
- 3.15 FIT MAMMOTH BLANKET - STRAPPED MASONRY WALLS  
Friction fit **Mammoth™ Masonry Wall** as a continuous blanket in between battens to [NZS 4246](#), clause 5.3.4, **Blankets - masonry walls**. Secure the blanket at the top of the wall and drape it down to the bottom plate. The blanket to be the same thickness as the battens. Do not fold, tuck or compress the insulation.
- 3.16 FIX MAMMOTH THERMAL BREAK SHEETS  
Fix **Mammoth™ Thermal Break** sheets to manufacturer's installation instructions. Fix sheets to steel frames using glue and/or ballistic tip shank nails. Firmly butt joints together and ensure the joints between sheets are on studs and/or noggs.  
*Used between steel framing and external cladding in steel frame construction. Can be on site or factory installed.*

### Application - ceiling/roof

*Some roofing may require ventilation clearance. Some polyester products may 'grow' in thickness well beyond their out-of-pack thickness when installed in situations of high heat build up such as skillion type roofs. This excessive growth needs to be accommodated within the roof design to maintain the minimum 25mm gap.*

- 3.17 LAY MAMMOTH BLANKET - OVER CEILING FRAMING  
Loose lay **Mammoth™ Ceiling Blanket** over ceiling framing and between truss chords. Fit securely around all penetrations, leave clearances where required. Hand tear Mammoth™ Ceiling Blanket to length as required.
- 3.18 FIT MAMMOTH BLANKET - BETWEEN CEILING FRAMING  
Friction fit **Mammoth™ Ceiling Blanket** between framing members. Hand tear across the blanket to fit between noggs and small spaces around penetrations. Leave no gaps and maintain full thickness of blanket over the whole of the installation. Leave clearance around metal flues, recessed light fittings, etc to [NZS 4246](#) and the manufacturer's requirements.
- 3.19 FIT MAMMOTH BLANKET - DOUBLE LAYERED INSULATION  
Friction fit first layer of **Mammoth™ Ceiling Blanket** parallel to and between ceiling framing members. Run a second layer of Mammoth™ Ceiling Blanket at 90° to and over the first layer over framing members. Hand tear across blanket to fit between noggs and small spaces around penetrations. Leave no gaps and maintain full thickness of blanket over the whole of the installation. Leave clearance around metal flues, recessed light fittings, etc to [NZS 4246](#) and the manufacturer's requirements.
- 3.20 FIT MAMMOTH SKILLION ROOF SECTION - BETWEEN RAFTERS  
Friction fit **Mammoth™ Skillion Roof Airly Sections** between ceiling rafters. Use an appropriate sharp craft knife with replaceable blades or specialised insulation saw to cut

to size or around penetrations if required. Maintain a minimum clearance of 25mm between the insulation and the roofing membrane (underlay) including where a solid timber (or plywood) substrate is used under the roof cladding.

- 3.21 FIT INSULATING BLANKET - COMMERCIAL / INDUSTRIAL  
Lay the **Mammoth™ Ceiling Blanket** in the same direction as and over the mesh/vapour barrier, firmly butting edges and ends together to leave no gaps. Tear blanket by hand across the width for length. Maintain full thickness of the insulation blanket over the whole installation except where detailed otherwise.
- 3.22 FIT MAMMOTH CARPARK PANELS - CONCRETE SUBSTRATE  
Fit **Mammoth™ Carpark Panels** to underside of soffit to manufacturer's instructions. Firmly butt joints together to leave no gaps. Maintain full thickness of the insulation and cut around services to friction fit in place. Fix using appropriate contact adhesive or automated fastening tool and suitable fasteners.
- 3.23 CEILING INSULATION EDGE DETAIL  
Where perimeter of ceiling space is too low to allow full depth of insulation plus the 25mm air gap, provide reduced perimeter insulation to [NZS 4246.5.2](#), **Ceilings - lined**.
- 3.24 FIX DRAPED WIRE NETTING  
Drape mesh at right angles across purlins with enough slack to allow insulation to retain its nominal thickness. Fix netting to every purlin to ensure even draping. Tie edges of netting together with galvanised wire clips.  
*Use this clause when fitting insulation over purlins or joists, all to the insulation manufacturer's requirements.*  
*Where the insulation material is not laid directly on a ceiling lining or over ceiling battens, joists and the like, it must be adequately supported by galvanised wire netting or some other suitable corrosion free material to Mammoth™ insulation requirements.*

### Completion

- 3.25 CLEAN UP  
Clean up as the work proceeds. Ensure no spare off cuts or any other materials remain behind claddings or linings.
- 3.26 LEAVE  
Leave work to the standard required by following procedures.
- 3.27 REMOVE  
Remove debris, unused materials and elements from the site.

### 4. SELECTIONS

For further details on selections go to [www.mammoth.co.nz](http://www.mammoth.co.nz)  
Substitutions are not permitted to the following, unless stated otherwise.  
*If substitutions are permitted modify the statement above, ensure the NO SUBSTITUTIONS clause from GENERAL is treated the same.*

*Select the options to suit the project and delete options not specified.*

*Insulation thickness will vary with the R-Value, and stud sizing, so select accordingly to suit project and delete option not selected. Refer to the Mammoth™ Data Sheets for specific information and product selection.*

### Underfloor insulation

- 4.1 MAMMOTH™ MULTI UNDERFLOOR SECTIONS - MEDIUM DENSITY  
Location: ~  
Brand: **Mammoth™ Multi Underfloor** (friction fitted, airlay)  
R Value: R1.9  
Thickness: 90mm  
Dimensions: ~  
*Available pre-cut to suit a wide range of floor joist spacing, so specify accordingly:  
Options*

|                    |
|--------------------|
| <i>Dimensions:</i> |
| 370mm x 800mm      |
| 370mm x 1140mm     |
| 425mm x 800mm      |
| 425mm x 1140mm     |
| 475mm x 800mm      |
| 475mm x 1140mm     |
| 580mm x 800mm      |
| 580mm x 1140mm     |

4.2 MAMMOTH™ NOVAFLOOR SECTIONS - HIGH DENSITY

Location: ~  
Brand: **Mammoth™ NOVAfloor Underfloor** (friction fitted, airlay)  
R Value: R1.4  
Thickness: 55mm  
Dimensions: ~

*Available pre-cut to suit a wide range of floor joist spacing, so specify accordingly:*

*Options:*

|                   |
|-------------------|
| <i>Dimensions</i> |
| 1200mm x 375mm    |
| 1200mm x 435mm    |
| 1200mm x 485mm    |
| 1200mm x 535mm    |
| 1200mm x 580mm    |
| 1200mm X 600mm    |

4.3 MAMMOTH™ UNDERFLOOR BLANKET

Location: ~  
Brand: **Mammoth™ Underfloor Blanket**  
R Value: R~  
Thickness: ~mm

*Insulation blanket available for wall insulation with different R values and thickness, so specify accordingly.*

*Options*

| <i>R value</i> | <i>Thickness:</i>       | <i>Dimensions:</i> |
|----------------|-------------------------|--------------------|
| R1.5           | 100mm nominal thickness | 450mm x 13890mm    |
| R1.5           | 100mm nominal thickness | 510mm x 16340mm    |
| R1.5           | 100mm nominal thickness | 600mm x 13890mm    |
| R1.8           | 115mm nominal thickness | 450mm x 11111mm    |
| R1.8           | 115mm nominal thickness | 510mm x 13070mm    |
| R1.8           | 115mm nominal thickness | 600mm x 11110mm    |

**Wall insulation**

4.4 MAMMOTH™ WALL BLANKET - 140MM TIMBER STUD

Location: ~  
Brand: **Mammoth™ Wall Blanket**  
R Value: R~  
Thickness: ~mm

*Insulation blanket available for wall insulation with different R values and thickness, so specify accordingly.*

*Options:*

| <i>R value</i> | <i>Thickness:</i>       | <i>Dimensions:</i> |
|----------------|-------------------------|--------------------|
| R2.2           | 90mm nominal thickness  | 360mm x 9870mm     |
| R2.2           | 90mm nominal thickness  | 560mm x 10800mm    |
| R2.6           | 140mm nominal thickness | 380mm x 8550mm     |
| R2.6           | 140mm nominal thickness | 580mm x 7470mm     |
| R3.0           | 140mm nominal thickness | 580mm x 8620mm     |

4.5 MAMMOTH™ WALL SECTIONS - AIRLAY

Location: ~  
Brand: **Mammoth™ Wall Sections** (friction fitted, airlay)  
R Value: R~  
Thickness: ~mm

*Insulation sections available for wall insulation with different R values, so specify accordingly.*

*Options:*

| <i>R value</i> | <i>Thickness:</i>              | <i>Dimensions</i>    |
|----------------|--------------------------------|----------------------|
| <i>R1.9</i>    | <i>90mm nominal thickness</i>  | <i>370mm x 800mm</i> |
| <i>R1.9</i>    | <i>90mm nominal thickness</i>  | <i>580mm x 800mm</i> |
| <i>R2.0</i>    | <i>90mm nominal thickness</i>  | <i>360mm x 760mm</i> |
| <i>R2.0</i>    | <i>90mm nominal thickness</i>  | <i>560mm x 760mm</i> |
| <i>R2.2</i>    | <i>90mm nominal thickness</i>  | <i>360mm x 760mm</i> |
| <i>R2.2</i>    | <i>90mm nominal thickness</i>  | <i>560mm x 760mm</i> |
| <i>R2.8</i>    | <i>140mm nominal thickness</i> | <i>360mm x 760mm</i> |
| <i>R2.8</i>    | <i>140mm nominal thickness</i> | <i>560mm x 760mm</i> |

*For timber and steel applications.*

4.6 MAMMOTH™ WALL SECTIONS

Location: ~  
Brand: **Mammoth™ Wall Sections**  
R Value: R2.5  
Thickness: 90mm

*Options for dimensions:*

| <i>R value</i> | <i>Thickness:</i>             | <i>Dimensions</i>    |
|----------------|-------------------------------|----------------------|
| <i>R2.5</i>    | <i>90mm nominal thickness</i> | <i>360mm x 760mm</i> |
| <i>R2.5</i>    | <i>90mm nominal thickness</i> | <i>560mm x 760mm</i> |

*For timber and steel applications.*

4.7 MAMMOTH™ MASONRY WALL BLANKET

Location: ~  
Brand: **Mammoth™ Masonry Wall Blanket**  
R Value: R1.0  
Thickness: 45mm

*Insulation available 580mm x 12930mm.*

4.8 MAMMOTH™ MASONRY WALL SECTIONS - AIRLAY

Location: ~  
Brand: Mammoth™ Masonry Wall **Sections** (friction fit airway)  
R Value: R1.3  
Thickness: 45mm

*Insulation available with different dimensions.*

| <i>R value:</i> | <i>Thickness:</i>             | <i>Dimensions:</i>    |
|-----------------|-------------------------------|-----------------------|
| <i>R1.3</i>     | <i>45mm nominal thickness</i> | <i>360mm x 2400mm</i> |
| <i>R1.3</i>     | <i>45mm nominal thickness</i> | <i>560mm x 2400mm</i> |

4.9 MAMMOTH™ THERMAL BREAK

Location: ~  
Brand: **Mammoth™ Thermal Break**  
R-Value: R0.38  
NRC: 0.5  
Thickness: 13mm

Dimensions: 2420mm x 1800mm

Facing: ~

*Option:*

|                |                                      |
|----------------|--------------------------------------|
| <i>Facing:</i> | <i>Faced on one side or un-faced</i> |
|----------------|--------------------------------------|

*Application: To provide thermal separation between steel framing and external cladding in steel frame construction.*

**Ceiling insulation**

4.10 MAMMOTH™ CEILING BLANKET

Location: ~  
Brand: **Mammoth™ Ceiling Blanket**  
R Value: R~  
Thickness: ~mm

*Insulation blanket available for ceiling insulation with different R values, so specify accordingly:*

| <i>R value:</i> | <i>Thickness:</i>              | <i>Dimensions:</i>     |
|-----------------|--------------------------------|------------------------|
| <i>R1.8</i>     | <i>115mm nominal thickness</i> | <i>870mm x 11495mm</i> |
| <i>R2.9</i>     | <i>185mm nominal thickness</i> | <i>870mm x 8620mm</i>  |
| <i>R3.2</i>     | <i>200mm nominal thickness</i> | <i>870mm x 8620mm</i>  |

|      |                         |                |
|------|-------------------------|----------------|
| R3.6 | 225mm nominal thickness | 870mm x 7470mm |
| R4.0 | 240mm nominal thickness | 870mm x 5750mm |

Insulation blanket laid over ceiling battens and joists, or between trusses, is offered to achieve the maximum construction R Value. Available 870mm wide for framing at 900mm centres or custom width, loose-laid on ceiling battens and between truss chords.

#### 4.11 MAMMOTH™ CEILING BLANKET - DOUBLE LAYERED INSULATION

Location: ~  
Brand: **Mammoth™ Ceiling Blanket**  
R Value: ~  
Thickness: ~

Insulation blanket available for ceiling insulation with different R values, so specify accordingly:

| R value: | Thickness:              | Dimensions:     |
|----------|-------------------------|-----------------|
| R1.8     | 115mm nominal thickness | 870mm x 11495mm |
| R2.9     | 185mm nominal thickness | 870mm x 8620mm  |
| R3.2     | 200mm nominal thickness | 870mm x 8620mm  |
| R3.6     | 225mm nominal thickness | 870mm x 7470mm  |
| R4.0     | 240mm nominal thickness | 870mm x 5750mm  |

Friction fit first layer parallel to and between ceiling framing members. Run a second layer at 90° to and over the first layer over framing members.

#### 4.12 MAMMOTH™ CARPARK PANEL

Location: ~  
Brand: **Mammoth™ Carpark Panel** (friction fitted, airtight)  
R-Value: R1.7  
Thickness: 70mm  
Dimensions: 2400mm x 1200mm

#### 4.13 MAMMOTH™ SKILLION ROOF SECTIONS

Location: ~  
Brand: **Mammoth™ Skillion Roof** (friction fitted, airtight)  
R-Value: ~  
Thickness: ~mm

Insulation pad friction fitted in timber framed membrane roofs and skillion roofs: Insulation thickness will vary with the R-value so select accordingly.

Options:

| R value: | Thickness:              | Dimensions:    |
|----------|-------------------------|----------------|
| R2.9     | 115mm nominal thickness | 560mm x 1200mm |
| R2.9     | 115mm nominal thickness | 860mm x 1200mm |
| R3.2     | 165mm nominal thickness | 570mm x 1200mm |
| R3.2     | 165mm nominal thickness | 870mm x 1200mm |

Available 560mm and 870mm wide to fit between ceiling battens.