



Temper
Therm

Installation

TemperTherm 100% Polyester Thermal & Acoustic Blanket, Slab & Segment

TemperTherm 100% Polyester is a range of thermal and acoustic insulating materials manufactured from thermally bonded polyester fibres. TemperTherm 100% Polyester Insulation is available in blanket and segment form to suit a wide range of thermal insulation requirements and framing set-outs in walls, ceilings and roofs of buildings.

TemperTherm 100% Polyester products provide both thermal and acoustic insulation. Our TemperTherm 100% Polyester Insulation is made from minimum 45% post-consumer recycled plastics (PET), and is safe to touch and will never slump, sag, or reduce its performance. Our entire TemperTherm range carry a 50 Year Product Durability Warranty.

COMPLIANCE STATEMENTS

The total R-Value of the building system depends on the building materials, design and installation and may be less than, greater than, or equal to the declared R-Value of the insulation product.

The initial performance of the insulation material may be reduced if it is stored for too long in its compressed packaging.

Should this product be found to be compressed at installation, it will recover to its nominal thickness and R-Value between 48 Hours and up to one month following installation.

TemperTherm 100% Polyester Insulation should be removed from its compressed packaging within 6 months from the date of manufacture. TemperTherm 100% Polyester Insulation will meet and exceed the 50 year durability clause of the NZBC (B2.3.1(a)) when installed in accordance with these manufacturer's instructions.

TemperTherm 100% Polyester Insulation is supplied with labelling compliant with AS/NZS4859.1.

The nominal thickness, net area, and nominal weight of each pack is recorded on the product bale label.

INSTALLER SAFETY

Each installation is unique so prior to installing insulation check for hazards that could cause injury. Our 100% polyester insulation is completely safe and there are no precautions or specialist safety equipment required to handle or install our products. Our 100% Polyester Insulation is non-toxic, non-irritant and non-allergenic.

We do however recommend some basic PPE when installing insulation. PPE should include dust mask, safety glasses, appropriate clothing or coveralls, and cut resistant gloves to protect from cuts.

CAUTION: Electric cables and equipment partially or completely surrounded with any bulk thermal insulation may overheat and fail. This applies to wiring installed prior to 1989.

Refer NZS4246:2016 for required insulation clearances to downlights and electrical appliances. In retrofit situations we recommend that the installation process is performed with the power off. In accordance with NZS4246:2016 it is advised that all electrical cables are identified. Treat all electrical cables as live, being careful not to cut or expose cables and wires.

TRANSPORTATION & STORAGE

TemperTherm Insulation must be stored under cover and in dry conditions. Heavy objects must not be stacked on the packs. Packs should be stored in an orientation that avoids excessive compression of the product.

TemperTherm 100% Polyester Insulation is supplied in compressed packaging sleeves in order to increase freighting efficiency. Insulation must be released from the packaging and allowed to re-loft prior to installation. The time to loft will depend upon the length of time the product has been packaged and stored.

INSTALLATION TOOLS

We recommend you have the following installation tools: step ladder, head-torch, wide blade snap/disposable knife or specialist insulation cutter/knife/saw, and an installing stick, such as a broom handle for pushing the insulation into corners and hard to reach places in the ceiling. Some installations may also need a staple gun, 12-14mm staples, and strapping for supporting insulation in place.

Protective clothing is recommended, including coveralls, gloves, covered shoes, goggles and dusk mask.



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INSTALLATION INSTRUCTIONS

All thermal and acoustic insulation should be installed in accordance with the appropriate provisions of NZS4246:2016 Energy Efficiency – Installing Insulation in Residential Buildings. Standards New Zealand has made this Standard freely available for download from their website.

Cutting to Size

Always cut slightly oversized to ensure a tight friction fit to all surfaces.

Lighter-weight rolls can easily be torn across the width by hand. Insulation rolls and segments can be cut down the length using an insulation saw, sharp scissors or by compressing the insulation under a timber off-cut and then cutting through with a sharp wide blade disposable knife. Heavier and higher density products can be cut using a specialist insulation knife, mechanical cutter, or insulation saw.

Insulate All Areas

Insulate all areas of the thermal envelope leaving no gaps, and following the Consented plans and specifications.

Off-cuts can be used to fill small spaces. Small gaps can reduce the overall thermal performance of the construction system.

Do not compress insulation unless this is a design specification as this will affect the thermal performance.

If walls in roof cavities remain unlined, strapping should be used to secure the insulation (strapping should be installed horizontally, at a maximum spacing of 300mm).

Walls

Ensure framing depth will allow the insulation to be installed without compression to its declared nominal thickness.

TemperTherm 100% Polyester Wall Insulation should be friction fitted inside the framing cavity ensuring no gaps. All of the wall space in exterior walls should be insulated (i.e. from the top to the bottom plates). Installed insulation should be even and tidy with no folds or excessive compression lines.

NZBC E2/AS1, 9.1.8.5 Wall Framing behind Cavities, requires stud straps to prevent insulation bulging into the cavity where the stud spacing is greater than 450mm. Straps must be run at 300mm centres over the wall underlay.

Retrofitting exterior walls (without wall underlay) with direct-fixed claddings, may require a building consent, and will require semi-rigid insulation that is at least 20mm thinner than the framing (90mm framing will require insulation no thicker than 70mm). Insulation should be placed to the inside of the cavity (touching the interior lining).

Strapped & Lined Masonry Walls

Cut and fit the Masonry Wall & Service Cavity Blanket/Segment slightly wider than the gap between the timber battens.

The insulation should be stapled to the timber battens each side at the top of each drop to securely hold the insulation in place until the wall linings are in place.

Install as a continuous drop between the battens. Where joins are necessary, ensure a tight fit with no gaps or folds and fix securely in place by stapling edges to the strapping.

TemperTherm Masonry Wall & Service Cavity Insulation is manufactured from 100% polyester fibres and will not wick moisture so it can be installed directly against concrete/masonry walls.

Timber strapping/battens should be isolated from concrete/masonry with DPC.

Ceilings

A 25mm ventilation gap must be maintained between the roofing underlay and the insulation at all times. A minimum gap of 100mm must be left around un-rated recessed down lights, 200mm around un-ducted vents, 75mm gap around metal heating flues and 50mm around brick/concrete chimneys. Do not cover ceiling vents. Refer NZS4246:2016 for further information and clearances.

Ceiling insulation should be installed after the ceiling battens, electrical, plumbing, and ducting has been installed. Where battens are not installed prior to the installation, strapping should be used to support the insulation in place.

All of the ceiling area should be covered with insulation except around chimneys, heating flues, non CA/IC rated recessed lights and non-ducted extractor fans. Insulation should be installed to at least the centre of the wall top plate to ensure the thermal envelope is maintained. Where possible, insulation should be placed beneath electrical wiring to allow access for maintenance and to prevent possible over-heating.



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Single-Layer Ceiling Installation

Single-layer Insulation installed to meet NZBC H1 requirements must cover the truss chords/ceiling joists and be tightly fitted around any truss members, ensuring no gaps. Insulation should be fitted to maintain nominal thickness of the insulation. Joins in insulation pieces should be butted tight and even.

Double-Layer Ceiling Installation

Higher R-Value installations may require a 'double-layer' installation. In roofs with a roof space, the bottom layer should be fitted between the truss chords and over the ceiling battens, and the top layer at right-angles to, and over the top. Joins in insulation pieces should be off-set between the layers.

Install with no gaps except around chimneys, heating flues, non CA/IC rated recessed light fittings and un-ducted extractor fans as detailed previously.

Ceiling Perimeters

NZBC H1 fifth edition Schedule Method for compliance for Housing and Buildings up to 300m² allows reduced Roof R-Value (R3.3) up to 500mm from the outer edge of the ceiling perimeter. Refer to Consented plans and specifications for insulating to the outer perimeter of the roof where space restrictions may not allow the full thickness of insulation to be installed.

If an insulation guard is in place, this will allow compression of the ceiling insulation over the top plate while maintaining the required ventilation gap.

Skillion Roofs

In skillion roof installations, fit the insulation pieces between the rafters ensuring no gaps. When installing as a double-layer, off-set insulation joins between the layers.

Ensure rafter depth will allow the insulation to be installed without compression to its declared nominal thickness while ensuring a 25mm ventilation gap is maintained between the insulation and roofing underlay at all times.

Skillion roof insulation should be installed from the underside after the ceiling battens, electrical, plumbing, and ducting has been installed. Where battens are not installed prior to the installation, either strap the underside of the rafters or staple the insulation directly to the inside of the rafters to secure in place.

Insulated Service Cavities

TemperTherm 100% Polyester Masonry Wall & Service Cavity Insulation can be installed in wall and ceilings between the service cavity or rondo battens, after electrical, plumbing and ducting has been installed.

The insulation can be gently compressed or cut to accommodate services hardware. Maintain required space to non-IC rated downlights, chimneys, heating flues, and non-ducted extractor fans

Cut and fit slightly wider than the gap between the timber battens and staple through the insulation and into the battens to hold in place. If installed between metal battens, staple the insulation directly to the underside of the rafters to hold in place.

If an air-tightness layer is being installed on either the external walls or ceilings, ensure when stapling into service cavity battens that no staples penetrate the air-tightness layer.

COMPLETION

Check installed insulation is secure, tidy, and not compressed, and that all areas are insulated. Leave work area tidy and remove unused materials and waste from site.

For future reference we recommend you staple a product label of the insulation products used in an easy to find location such as on truss/rafter above ceiling access hole or hot water cupboard.

NOTES

Wet or damp insulation should be removed and replaced with new insulation.

Ceiling insulation should not be installed in a roof space where foil has been installed as a roof underlay.

Refer to NZS4246:2016 Energy Efficiency – Installing Insulation in Residential Buildings.

Refer BRANZ Appraisal and BPIR for installation limitations.



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SPECIFICATIONS & TECHNICAL SUPPORT

TemperTherm specification documents are available from our website. For specification or technical support please contact our Technical Team on 07 282 1184, or email support@tempertherm.co.nz

TemperTherm

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Declare.



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