Installation
TemperTherm Thermal & Acoustic Glasswool Insulation

TemperTherm Glasswool is a range of thermal insulating materials manufactured from resin-bonded, glasswool fibres TemperTherm Glasswool 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.

GLASSWOOL THERMAL BLANKET & SEGMENT INSTALLATION INSTRUCTIONS

TemperTherm Glasswool products provide both thermal and acoustic insulation. Our TemperTherm Glasswool is made from up to 90% recycled materials, and is ideal for ceilings, walls and roofs. Our entire TemperTherm Glasswool 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 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 Glasswool insulation should be removed from its compressed packaging within 6 months from the date of manufacture.

TemperTherm Glasswool 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 Glasswool 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

It is recommended that PPE to be worn when installing glasswool insulation to prevent temporary skin irritation or inhalation of fibres. 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.

INSTALLATION TOOLS

We recommend you have the following installation tools: step ladder, head-torch, wide blade snap/disposable knife of insulation 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. Protective clothing is recommended, including coveralls, gloves, covered shoes, goggles and dusk mask.

TRANSPORTATION & STORAGE

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

TemperTherm Glasswool 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. Gently agitate the insulation pieces by shaking or bouncing it on its side to help it release from compression and recover to its nominal thickness.

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All thermal and acoustic insulation should be installed in accordance with 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. Cut with a sharp wide-blade snap/disposable knife. Heavier and higher-density products can be cut using a specialist insulation saw or insulation knife.
Insulate all areas of the wall and ceiling 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.

Walls

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

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.
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.

Single-Layer Ceiling Installation

Single-layer Insulation installed in a truss roof to meet NZBC H1 requirements may require the truss bottom chords to be covered, and the insulation to be tightly fitted around any truss members, ensuring no gaps. Refer to the project specifications and H1 compliance documents for requirements.

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 insulation layer should be fitted between the truss chords and over the ceiling battens, and the top layer should be installed covering the truss chords and fitted around truss members to ensure no gaps. Joins between insulation layers should be offset between the two layers to ensure full cover and reduce thermal bridging.

The top layer can be installed first, with the bottom layer being installed underneath it.

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

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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

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