



## Ecofleece® Thermal Insulation

### Ecofleece® – Application

Ecofleece® is a range of quality thermal insulation products designed for ceilings, walls and floors of residential and commercial buildings to assist in meeting the requirements of NZBC H1 energy Efficiency.

Ecofleece® consists of recycled or natural wool which has been thermally bonded with polyester fibre to produce a soft bulk fibre insulation blanket.

### Ecofleece® – Identifying it

Recycled Ecofleece® consists of coloured wool sourced from New Zealand wool product manufacturers blended with up to 40% polyester.

Natural Ecofleece® is available on request and consists of at least 80% virgin New Zealand sheep's wool blended with up to 20% polyester fibre.

Individual Ecofleece® packs are labelled to identify the specific R-Value, coverage per pack in m<sup>2</sup>, material width, unit number or length of material, nominal thickness, minimum weight and date of manufacture. Ecofleece® complies with the insulation standard AS/NZS 4859.1.

### Ecofleece® – Benefits and features

- Ecofleece® is produced from natural fibre making it a pleasure to install.
- Ecofleece® helps prevent moisture build up, reducing the chance of condensation and mould.
- Ecofleece® is said to 'breathe' by absorbing and releasing water vapour and will work in harmony between the inside and outside environments keeping the building warmer in winter and cooler in summer.
- Ecofleece® has great acoustic properties and can reduce unwanted noise.
- Recycled Ecofleece® is manufactured using 100% recycled wool.

## Ecofleece® – Specifications and substitutions

Eco Insulation's specification downloads are available through Masterspec and can also be downloaded through our website [www.ecoinsulation.co.nz](http://www.ecoinsulation.co.nz).

## Ecofleece® – Environmental

Ecofleece® and its associated packaging is recyclable.

Recycled Ecofleece® also reuses wool as an integral part of product manufacture.

Eco Insulation is committed to the development and fostering of sustainable building products and practices and is a member of the New Zealand Green Building Council.

## Ecofleece® – Where can it be used?

Ecofleece® insulation must not be installed if the moisture content of timber framing exceeds 20%.

In buildings where there is a high humidity, such as swimming pool halls or saunas, Ecofleece® insulation must be isolated from the moisture by a vapour barrier.

Coverage per pack of Ecofleece® insulation depends on the product and its thickness. Typical roll lengths and coverage per pack are summarised in Table 1.

## Ecofleece® – Thermal performance

Ecofleece® insulation is available in the specific R-Values given in Table 1.

To obtain the installed R-Value of Ecofleece® insulation, refer to NZS 4218 or the BRANZ House Insulation Guide which takes account of the construction being used to give an R-Value for the completed element. Compliance with the requirements of NZBC H1 and E3 can then be determined.

## Ecofleece® Thermal Performance and Physical Properties


	Insulation R-Value		Width (mm)	Thickness (mm)	Actual m <sup>2</sup> Per Pack
Wall	1.8	✓	580	95	10
	2.2	✓	580	90	8
	2.4		580	90	8
	2.6	✓	580	140	10
Ceiling	1.8	✓	870	95	10
	2.6	✓	870	140	10
	2.9	✓	870	180	6
	3.2	✓	870	185	6
Double Layer System	2 x 1.8 3.5	✓	870	190	5
	2 x 2.2 4.3	✓	580	180	4
	2 x 2.6 5.1	✓	580	280	5

TABLE 1



\* Natural Ecofleece® is a non-stock item. Special runs can be made to order but minimum quantities apply.

## Ecofleece® – Acoustic performance

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Ecofleece® insulation will absorb sound in the 500 Hz to 8 KHz range. Specific absorption data as part of an acoustically rated construction element is not currently available. Contact Eco Insulation on 0800 400 ECO for more information.

## Ecofleece® – BRANZ appraisal

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Eco Insulation Systems Ltd are the holders of BRANZ Appraisal Certificate No.464 (2012).

Ecofleece® insulation has therefore demonstrates it meets the relevant requirements of the NZBC, namely:

- B2 Durability,
- H1 Energy Efficiency,
- E3 Internal Moisture and
- F2 Hazardous Building Materials.

Contact Eco Insulation for more information.

## Ecofleece® – Compliance

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Ecofleece® thermal insulation, when installed in accordance with the manufactures instructions will satisfy the 50 year durability clause NZBC B2.3.1 (a). Ecofleece® meets the relevant clauses of NZBC; E3 Internal Moisture, F2 Hazardous Building Materials and will assist in meeting H1 Energy Efficiency.

## Ecofleece® – Fire performance

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When installing Ecofleece® insulation in ceilings where recessed downlights (RDL) are present, the requirements as outlined by NZS4246 should be maintained.

**Ecofleece® insulation is not be installed over the top of, or abut to, down lights and their auxiliary equipment such as transformers.**

A minimum clearance of 100mm around RDL's needs to be maintained.

## Ecofleece® – Corrosion

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Ecofleece® insulation is non-corrosive to carbon steel when tested to NZS 4222, copper and aluminium.

## Ecofleece® – Safety

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Ecofleece® insulation is non-irritant, non-allergenic, non-toxic and odourless and can be installed without the need for protective clothing or equipment, but it is recommended.

## Ecofleece® – Moisture

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Ecofleece® insulation will provide maximum insulation when it is dry in service. The insulation value will be lost when it is wet. Ecofleece® which has become wet must be removed, dried, re-lofted and reinstated to restore the insulation value.



**Head Office**  
Eco Insulation Systems Ltd  
PO Box 77-059  
Mt Albert  
Auckland 1350  
technicalsupport@ecoinsulation.co.nz

**0800 400 326**

Local Stockist

**eco**insulation

## Ecofleece® – Vermin

The sheep wool in Ecofleece® insulation is treated with lavanil during the scoring process to resist attack from insects. Lavanil comprises of bifenthrin and other inert ingredients with a pH of 7.0 (pH7.0 being neutral).

## Ecofleece® – Testing

The following independent testing of Ecofleece® insulation has been undertaken:

- Thermal resistance – **BRANZ**
- Corrosivity – **Materials Performance Technologies**
- Insect resistance – **Canesis**

## Ecofleece® – Quality assurance

Eco Insulation's manufacturing systems and materials supply have been audited by BRANZ as part of the Appraisal process. Eco Insulation's manufacturing systems and materials supply are subjected to regular in-house quality control checks.

## Ecofleece® – Warranties

Eco Insulation will check and certify the installation of their products when their own licensed installer is used. Refer to our website for your nearest franchise.

## Ecofleece® – Installation

Eco Insulation recommends that all thermal and acoustic insulation be installed in accordance with the manufactures instructions (included in each pack) and NZS 4246 Energy Efficiency Installing Insulation in Residential Buildings.

Eco Insulation has a network of trained installers to ensure our products are installed correctly to the above standards. Eco Insulation is a member of IAONZ (Insulation Association of New Zealand).

## Ecofleece® – Availability

Contact Eco Insulation for your local supplier of Ecofleece.®

## Ecofleece® – Finding out more

To obtain further information on Ecofleece® insulation, Ecofleece® suppliers, or other Eco Insulation products call toll free 0800 400 326 or visit [www.ecoinsulation.co.nz](http://www.ecoinsulation.co.nz)