





# Datasheet

## TemperTherm 100% Polyester Suspended Underfloor Blanket

TemperTherm 100% Polyester Suspended Underfloor Thermal Blanket range is proudly manufactured in NZ from thermally-bonded polyester fibres, and contains minimum 45% recycled fibre from post-consumer recycled PET plastic. Our Underfloor Blanket range has been designed to thermally insulate exposed timber joist floors in residential and commercial buildings.

	Nominal Thickness	Product Format	Standard Widths	Thermal Conductivity ( $\lambda$ 50/90)		
<b>TEMPERTHERM 100% POLYESTER SUSPENDED FLOOR THERMAL INSULATION</b>						
R1.5 Retro-Fit Underfloor	100mm	Roll Form	450mm/ 510mm/ 600mm/ 650mm	0.0571 W/mK	✓	✓
R1.8 Retro-Fit Underfloor	115mm	Roll Form		0.0524 W/mK	✓	✓
R2.0 Retro-Fit Underfloor	115mm	Roll Form		0.0524 W/mK	✓	✓
R2.6 140mm Underfloor	140mm	Roll Form	370mm/420mm	0.0511 W/mK	✓	✓
R2.8 140mm Underfloor	140mm	Roll Form	370mm/420mm	0.0441 W/mK	✓	✓
R3.2 140mm Underfloor	140mm	Roll Form	370mm/420mm	0.0430 W/mK	✓	✓
R3.4 140mm Underfloor	140mm	Roll Form	370mm/420mm	0.0412 W/mK	✓	✓
R3.0 165mm Underfloor	165mm	Roll Form	370mm/420mm	0.0497 W/mK	✓	✓
R3.6 165mm Underfloor	165mm	Roll Form	370mm/420mm	0.0457 W/mK	✓	✓
R3.8 165mm Underfloor	165mm	Slabs	370mm/420mm	0.040 W/mK	✓	✓

### KEY FEATURES

- Manufactured using 100% polyester fibres and contains a minimum 45% post-consumer recycled PET plastics.
- Moisture and vermin resistant.
- Cost effective, flexible, and easy to install.
- Non-toxic, non-allergenic, non-irritant, soft and safe to touch.
- Proudly Made in NZ.
- Select products are BRANZ Appraised & Eco Choice Aotearoa Certified.
- 50 Year Durability Warranty.

### BRANZ APPRAISAL

Selected TemperTherm Polyester Insulation products are BRANZ Appraised (Appraisal 1090 (2019)).

A BRANZ Appraisal is a robust, in-depth and independent evaluation of a building product or system to assess it's fitness for purpose and compliance with Building Code performance requirements.



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### NZBC COMPLIANCE

When installed in accordance with the manufacturer's instructions, TemperTherm Polyester Insulation will perform for a minimum of 50 years, meeting the durability clause of NZBC B2.3.1 (a). TemperTherm Polyester meets the relevant clauses of NZBC E3 Internal Moisture, F2 Hazardous Buildings Materials and will support buildings to meet the H1 Energy Efficiency H1.3.1(a) & H1.3.2.E.

TemperTherm Polyester must be:

- Installed & maintained in a dry, protected environment.
- Installed in a building where provisions of NZBC E2 and E3 are met.
- Installed to the requirements of NZD 4226:2016: Energy Efficiency-Installing Bulk Thermal Insulation in Residential Buildings.

### NZBC C1-C6 PROTECTION FROM FIRE

All polyester insulation is classified as combustible insulating materials, and may therefore not be suitable for all applications, as stipulated in NZBC C-Production from Fire. We recommend you consult a Fire Engineer before specifying Polyester Insulation in buildings other than those described in Risk Group SH.

PIL Group Ltd polyester insulation has been tested to ISO 9705: 1993

Classification:	Group 1-S
Smoke Production Rate:	1.0m <sup>2</sup> /s and therefore within the 5.0m <sup>2</sup> /s limit
Product Range:	100% Polyester up to 1,800gsm
Report Ref:	BRANZ FC18133-01-2 (June 2024)
Classification:	Group 3
Smoke Production Rate:	1.0m <sup>2</sup> /s and therefore within the 5.0m <sup>2</sup> /s limit
Product Range:	100% Polyester 1,800gsm up to 4,800gsm, including double-layer install
Report Ref:	BRANZ FC18133-01-2 (June 2024)

### IEC60695-11-5 Downlight Fire Standard

PIL Group Ltd Polyester Insulation has been tested and assessed as complying with IEC60695-11-5 Needle Flame Test.

Report Ref: Spectrum Lab Report No. 8616 (Aug 2023).

### ENVIRONMENTAL

TemperTherm Insulation is proud to carry Eco Choice Aotearoa Certification for selected Polyester Thermal & Acoustic Insulation products.

All TemperTherm 100% Polyester Insulation products are manufactured in the same environmentally considerate way.

Eco Choice Aotearoa provides a credible and independent standard to guide people who want to purchase and use products that are proven to be better for the environment. At the foundation of Eco Choice Aotearoa are the technical specifications it develops, setting the most stringent, up to date standards for environmental compliance in business. New Zealand companies who meet or exceed these specification are permitted to display the ECA mark, widely recognised by New Zealanders as a badge of environmental leadership.

Eco Choice Aotearoa is internationally recognised as Level-A Eco-Label, and operates to internationally recognised standards and principles as a member of GEN, the Global Ecolabelling Network, which links a world of environmentally preferable products and services.

NZGBC GreenStar & HomeStar

TemperTherm 100% Polyester Insulation can support a buildings ability to meet the GreenStar & HomeStar accreditation. The specification and use of TemperTherm Polyester Insulation can support available 'points' for insulation materials. For specification or technical support, please contact our Technical Team on 07 282 1184 or email [support@tempertherm.co.nz](mailto:support@tempertherm.co.nz).

### INSTALLATION

It is recommended that all insulation be installed in accordance with the manufacturer's instructions and

NZS:4246 Energy Efficiency - Installing Insulation in Residential Buildings. Please refer to individual product installation instructions available from our website.



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### ACOUSTIC PERFORMANCE

TemperTherm 100% Polyester insulation will assist sound reduction, including booming from foot-fall by absorbing resonating noise under the floor. Performance will vary with different construction systems.

### NON-CORROSIVE & NON-HAZARDOUS

Polyester is considered non-corrosive and non-hazardous.

### 50 YEAR WARRANTY

PIL Group Limited takes pride in offering a 50-year Manufacturer's Durability Warranty for all TemperTherm branded polyester thermal and acoustic insulation. This warranty assures the durability of the insulation material when installed in compliance with the product BRABZ Appraisal, the product Installation Instructions, and NZ4246: Energy Efficiency - Installing insulation in residential buildings.

### POLYESTER MOISTURE ABSORPTION

TemperTherm Polyester Insulation does not absorb or wick moisture. Tested at 50°C d 90% Relative Humidity for four days, showed moisture absorption of 0.00% by weight.

Testing was conducted by AWTA in accordance with ASTM C739-97 (Section 12 Modified)

Ref: 23-003634 (Sep 23).

### PRODUCT SELECTION

TemperTherm Polyester Suspended Underfloor Blanket is designed for use in exposed joist floors. TemperTherm Polyester Underfloor Blanket is available in a range of widths and performance options and can be installed in enclosed, semi-enclosed and open sub-floor spaces.

Where wind wash is a concern in exposed open sub-floor spaces we suggest selecting the highest R-Value insulation suitable for the building. In fully open sub-floor spaces, it is recommended that a suitable lining material is also installed.

#### For NZBC H1 Compliant Underfloors

TemperTherm Polyester High-Performance Underfloor is designed to support new-build construction meet NZBC H1 requirements. These products are thicker and denser than traditional Retrofit blankets, so product selection is important. The insulation blanket should be slightly wider than the space between the floor joists to ensure a tight friction fit. We recommend the insulation width is 20-30mm less than the floor joist construction centres. TemperTherm Polyester High-Performance Underfloor is available in the following standard widths;

- TemperTherm Polyester Underfloor @ 370mm wide is ideal for floor joists set at 400mm centres.
- TemperTherm Polyester Underfloor @ 420mm wide is ideal for floor joists set at 450mm centres.

Other widths and options are available with minimum order quantities.

#### For Retrofitting Existing Underfloors

Our RetroFit underfloor insulation blankets are soft and offer excellent flexibility for insulating existing homes.

Choose the product width to best suit the framing size. Joist spacings can vary in older homes so be sure to measure more than just one. You may need several widths of TemperTherm Polyester Underfloor to complete the job and minimise waste.

TemperTherm Polyester RetroFit Underfloor is available in the following widths:

- TemperTherm Polyester Underfloor @ 450mm wide - ideal for joist spaces up to 430mm
- TemperTherm Polyester Underfloor @ 510mm wide - ideal for joist spaces between 430mm and 500mm
- TemperTherm Polyester Underfloor @ 600mm wide - ideal for joist spaces between 500mm and 580mm
- TemperTherm Polyester Underfloor @ 650mm wide - ideal for joist spaces between 580mm and 630mm



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	Nominal Thickness	Pack Format	Pack Size
<b>SUSPENDED UNDERFLOOR RANGE</b>			
R1.5 Retro-Fit Underfloor	100mm	450mm x 11.11LM x 4 Rolls 510mm x 9.8LM x 4 Rolls 600mm x 11.11LM x 3 Rolls 650mm x 10.25LM x 3 Rolls	20.0m <sup>2</sup>
R1.8 Retro-Fit Underfloor	115mm	450mm x 11.11LM x 4 Rolls 510mm x 9.8LM x 4 Rolls 600mm x 11.11LM x 3 Rolls 650mm x 10.25LM x 3 Rolls	20.0m <sup>2</sup>
R2.0 Retro-Fit Underfloor	115mm	450mm x 11.11LM x 4 Rolls 510mm x 9.8LM x 4 Rolls 600mm x 11.11LM x 3 Rolls 650mm x 10.25LM x 3 Rolls	20.0m <sup>2</sup>
R2.6 High-Performance Underfloor	140mm	370mm x 8.11LM x 5 Rolls 420mm x 8.93LM x 4 Rolls	15.0m <sup>2</sup>
R2.8 High-Performance Underfloor	140mm	370mm x 8.33LM x 4 Rolls 420mm x 7.44LM x 4 Rolls	12.5m <sup>2</sup>
R3.2 High-Performance Underfloor	140mm	370mm x 6.76LM x 4 Rolls 420mm x 7.93LM x 3 Rolls	10.0m <sup>2</sup>
R3.4 High-Performance Underfloor	140mm	370mm x 5.74LM x 4 Rolls 420mm x 6.74LM x 3 Rolls	8.50m <sup>2</sup>
R3.0 High-Performance Underfloor	165mm	370mm x 7.02LM x 5 Rolls 420mm x 7.73LM x 4 Rolls	13.0m <sup>2</sup>
R3.6 High-Performance Underfloor	165mm	370mm x 5.74LM x 4 Rolls 420mm x 6.74LM x 3 Rolls	8.50m <sup>2</sup>
R3.8 High-Performance Underfloor	165mm	370mm x 1200mm x 8 Slabs 420mm x 1200mm x 8 Slabs	3.56m <sup>2</sup> 4.03m <sup>2</sup>

### VOC EMISSIONS

PIL Group polyester insulation has been tested by CETEC Foray Ltd to ISO16000 Part 9:2011 with ISO16000

Part 11: 2011 "Determination of the emission of volatile organic compounds from building products and furnishing – Emission test chamber method" (Emission testing method for Greenguard UL 2818 certification program specification).

Report Reference: V2012043

VOC (C6 to C16) Emission Concentration: 0.007 mg/m<sup>3</sup>

Formaldehyde Emission Rate: <0.003ppm

All other Target CREL VOCs and their emission rates are well below the maximum allowable concentrations in accordance with Table 27A (revised December 30, 2014) of the standard method.



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### MATERIAL SAFETY DATASHEET

TemperTherm 100% Polyester Insulation Material Safety Data Sheet is available from our website, or by contacting our Technical Team on 07 282 1184, or email [support@tempertherm.co.nz](mailto:support@tempertherm.co.nz).

### CUSTOM MANUFACTURING

We offer simple product customisation to support specific project needs. Product width variations will require Minimum Order Quantity of 200m<sup>2</sup> per variant.

Please contact our Technical Team on 07 282 1184, or email [support@tempertherm.co.nz](mailto:support@tempertherm.co.nz) for more information.

### PACKAGING & RECYCLING

Our TemperTherm Polyester Insulation packaging is recyclable – made from LDPE 4 material.

Please refer to your local recycling centres for recycling options or contact PIL Group for information on our Take Back & Recycling options for plastic packaging and insulation off-cuts.

### 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](mailto:support@tempertherm.co.nz).

### TemperTherm

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