





**Temper**  
Therm

# Datasheet

## TemperTherm 100% Polyester Thermal Insulation Range

TemperTherm 100% Polyester Insulation is proudly manufactured in NZ from thermally bonded polyester fibres, for use in framed walls, ceilings, skillion roofs, suspended floors, and mid-floor applications in both residential and commercial construction and contains minimum 45% recycled fibre from post-consumer recycled PET plastic.

Our Polyester Insulation is available in a range of widths and performance options and is available in blanket, skillion and segment forms.

	Nominal Thickness	Product Format	Standard Widths	Thermal Conductivity (À 50/90)		
<b>TEMPERTHERM 100% POLYESTER 70mm/90mm/140mm HIGH-DENSITY THERMAL INSULATION</b>						
R1.8 70mm Wall	70mm	Segments	560mm	0.0368 W/mK	✓	✓
R2.0 70mm Retro Wall	70mm	Segments	560mm			
R2.0 Segments	90mm	Segments	360mm/560mm	0.0371 W/mK	✓	✓
R2.2 Segments	90mm	Segments	360mm/560mm	0.0350 W/mK	✓	✓
R2.5 Segments	90mm	Segments	360mm/560mm	0.0345 W/mK	✓	✓
R2.6 Segments	140mm	Segments	360mm/560mm	0.0511 W/mK	✓	✓
R2.8 Segments	140mm	Segments	360mm/560mm	0.0441 W/mK	✓	✓
R3.2 Segments	140mm	Segments	360mm/560mm	0.0430 W/mK	✓	✓
R3.4 Segments	140mm	Segments	360mm/560mm	0.0412 W/mK	✓	✓
R3.6 Segments	140mm	Segments	360mm/560mm	0.0380 W/mK	✓	✓

<b>TEMPERTHERM 100% POLYESTER THERMAL CEILING BLANKET</b>						
R1.8 Ceiling Blanket	115mm	Roll Form	870mm	0.0524 W/mK	✓	✓
R2.4 Ceiling Blanket	145mm	Roll Form	870mm	0.0523 W/mK	✓	✓
R2.9 Ceiling Blanket	185mm	Roll Form	870mm	0.0581 W/mK	✓	✓
R3.3 Ceiling Blanket	200mm	Roll Form	870mm	0.0562 W/mK	✓	✓
R3.6 Ceiling Blanket	225mm	Roll Form	870mm	0.0590 W/mK	✓	✓
R3.8 Ceiling Blanket	225mm	Roll Form	870mm			
R4.1 Ceiling Blanket	245mm	Roll Form	870mm	0.0570 W/mK	✓	✓



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## TemperTherm 100% Polyester Thermal Insulation Range

Nominal Thickness

Product Format

Standard Widths

Thermal Conductivity (λ 50/90)



### TEMPERTHERM 100% POLYESTER HD MID-FLOOR / SKILLION ROOF SEGMENTS

	Nominal Thickness	Product Format	Standard Widths	Thermal Conductivity (λ 50/90)	Eco Choice Aotearoa	BRANZ Appraised
R2.9 Mid-Floor-Skillion Segments	115mm	Segments	870mm	0.0385 W/mK		
R3.2 Mid-Floor-Skillion Segments	140mm	Segments	870mm	0.0430 W/mK	✓	✓
R3.4 Mid-Floor-Skillion Segments	140mm	Segments	870mm	0.0412 W/mK	✓	✓
R3.6 Mid-Floor-Skillion Segments	140mm	Segments	870mm	0.0380 W/mK	✓	✓
R3.2 Mid-Floor-Skillion Segments	165mm	Segments	870mm	0.0500 W/mK		
R3.6 Mid-Floor-Skillion Segments	165mm	Segments	870mm	0.0457 W/mK	✓	✓
R3.8 Mid-Floor-Skillion Segments	165mm	Segments	870mm	0.0400 W/mK	✓	✓

### TEMPERTHERM 100% POLYESTER MASONRY WALL & SERVICE CAVITY INSULATION

R1.0 Wall & Service Cavity Blanket	45mm	Roll Form	580mm	0.0428 W/mK		
R1.3 Wall & Service Cavity Segments	45mm	Segments	360mm/560mm	0.0345 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.

#### NZBC COMPLIANCE

TemperTherm Polyester is designed for thermal & acoustic insulation of buildings, when installed in accordance with the manufacturer's instructions, TemperTherm 100% 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 Building Materials, G6 Acoustic Design requirements 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.



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## TemperTherm 100% Polyester Thermal Insulation Range

### 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 sales@tempertherm.co.nz.

### 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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## TemperTherm 100% Polyester Thermal Insulation Range

### 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).

### NON-CORROSIVE & NON-HAZARDOUS

Polyester is considered non-corrosive and non-hazardous.

### 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 its fitness for purpose and compliance with Building Code performance requirements.

### 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 BRANZ Appraisal, the product Installation Instructions, and NZ4246: Energy Efficiency - Installing insulation in residential buildings.

### ACOUSTIC PERFORMANCE

TemperTherm 100% Polyester insulation will assist sound reduction by reducing the resonating noise inside the construction cavity. Performance will vary with different construction systems. The TemperTherm brand offers a range of specialist 100% polyester acoustic products. Please visit our website for more information. For acoustic design assistance, please get in touch with our team.

TemperTherm 100% Polyester R2.2 90mm Insulation has been independently assessed by Marshall Day Acoustics to verify it is a suitable sound control infill alternative in GIB® Noise Control® Systems. Refer: MDA LT 007 20221180 GE (PIL Polyester R2.2 90mm Testing and Verification).

### 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.

#### Drained Cavity Wall Construction

Drained cavity wall construction with stud spacings greater than 450mm requires stud straps to prevent insulation bulging into the cavity. Straps must run at 300mm centres over the wall underlay. Refer NZBC E2/AS1, 9.1.8.5 Wall Framing behind Cavities.

#### Double-Layer Ceiling Installations

For higher R-Value ceiling installations we recommend a 'double-layer' installation to reduce thermal bridging and heat-loss through timber construction. TemperTherm polyester will support multiple layers allowing performance flexibility. The bottom layer of insulation should be installed between the trusses. The second (top) layer should be installed tight around the trusses with joins off-set to the bottom layer of insulation. This will ensure a full cover of insulation and reduce heat-loss through timber construction.



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## TemperTherm 100% Polyester Thermal Insulation Range

### 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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