

InsulPro

NOVAtherm

creating better environments



*Four seasons outside  
One comfortable season inside*

Thermal insulation for existing homes

# Why choose InsulPro's NOVatherm polyester insulation?

## Guaranteed high performance

As appraised by BRANZ, the NOVatherm product range will perform for 50 years. InsulPro guarantee it!<sup>1</sup> NOVatherm is made from 100% polyester fibres which are bonded together using heat not glue so, unlike other products, there are no components which can break down.

## 100% safe and healthy

NOVatherm products are classified by OSH<sup>2</sup> as both non-irritant and non-toxic. NOVatherm is 100% safe for everyone, including asthma sufferers. Some traditional insulation products use formaldehyde in the glue, but NOVatherm is made from fibres bonded by heat.

## Easy and fast to install

NOVatherm ceiling blanket and NOVAfloor are favourites of many New Zealand installers since they are easy, fast and safe to work with. Professionals will get the job done right and be out of your house quickly. NOVatherm is a risk-free choice.

## Best value for money

Long-lasting high-performance insulation can save you money in heating and cooling bills and protect your family's health. The up-front cost of premium insulation is well worth the investment.

## A sustainable choice

NOVAfloor is the first underfloor insulation product to receive Environmental Choice certification. NOVatherm ceiling blanket (R3.6) and wall insulation (R2.6 and R2.8) are also certified. This recognises InsulPro's near zero waste production practices and use of recycled polyester fibres which come from recycled plastic bottles. InsulPro's polyester products are fully recyclable.

1 InsulPro guarantee that, so long as the insulation is installed correctly and remains adequately protected, NOVatherm and NOVAfloor will perform as well as when installed for 50 years.

2 Occupational Safety and Health Service. Health and Safety Guidelines for the Selection and Safe Handling of Synthetic Mineral Fibres. Department of Labour, 1994, p18.

## Save money with Government subsidies<sup>1</sup>

If your house was built before 2000 you are eligible for a 33% subsidy on insulation under the ENERGYWISE™ Warm Up New Zealand: Heat Smart programme, running over 4 years from June 2009. The subsidy (up to \$1,300 incl. GST) is available for NOVatherm and NOVAfloor fitted by a professional installer. It's not means tested, and if you hold a Community Services Card (or your rental tenant does) you are eligible for a 60% subsidy (or more) on the total cost of insulation. For more information see [www.energywise.govt.nz](http://www.energywise.govt.nz)

1 Information current at time of printing (August 2010).





**InsulPro**

## Creating better environments

### InsulPro's vision

*"We will be creating better living environments all over the world while protecting the biggest living environment of all."*

Paul Vujcich and Godfrey Hall began making insulation together in New Zealand in 1993. They were the first to bring polyester blended insulation to the New Zealand market. Publicity around dangerous construction materials such as asbestos and formaldehydes in glues, coupled with the new availability of affordable hollow polyester fibres, were the ingredients that formed the NOVATHERM range.

Insulation creates a healthier, more comfortable, home environment. A recent University of Otago study showed that improved heating and insulation cut hospital admissions for respiratory conditions by 38%<sup>1</sup> and energy use by 19%<sup>1</sup>.

Insulation is also a low cost step that can be taken to abate greenhouse gas emissions. Reduced electricity consumption means a smaller carbon footprint.

1 Professor Philippa Howden-Chapman et al. Effect of insulating existing housing on health inequality: cluster randomised study in the community. University of Otago, February 2007.



*"At InsulPro our commitment to the environment is more than greenwash – it's how we've always done business. Our manufacturing process requires no glues. Polyester is not a protein so we don't have to treat it with insecticide to stop it being eaten. It is fully recyclable – this means all of our waste is able to be fed back through the process."*

*Polyester, PET, is the same material that plastic bottles are made of. We can now buy fibres that are extruded from chipped up bottles, and we do. Every thermal insulation product we make contains recycled fibres. What better use for a waste material than turning it into a product that stops greenhouse gas emissions?*

*We believe our products save people money, improve people's health, and enable them to make a positive contribution to the environment."*

— Paul Vujcich, InsulPro Managing Director

## From waste to warmth





## A blanket for your ceiling

NOVATHERM insulation traps the heat inside your house in winter and keeps the heat out in summer.

Polyester has long been used in duvets, pillows and sleeping bags to provide warmth and comfort. NOVATHERM blanket works on the same principle. Heat is trapped under the blanket, in the fabric air pockets and inside the hollow fibres themselves.

Because NOVATHERM is installed in your ceiling as a blanket covering the ceiling joists there is less chance for heat to escape. NOVATHERM blanket has less joints than segment insulation which is inserted in pieces between the joists.

NOVATHERM is fast, safe and easy to install. No handling precautions are required, and

NOVATHERM can be easily torn to length.

With NOVATHERM you can achieve overall R values above R6.0. Consult InsulPro or talk with your installer to design the right system for you.

As an added benefit, NOVATHERM absorbs noise to create a quieter environment below the ceiling. And if moisture should ever get into your ceiling space, rest assured that NOVATHERM won't break down as there are no glues used in making it.

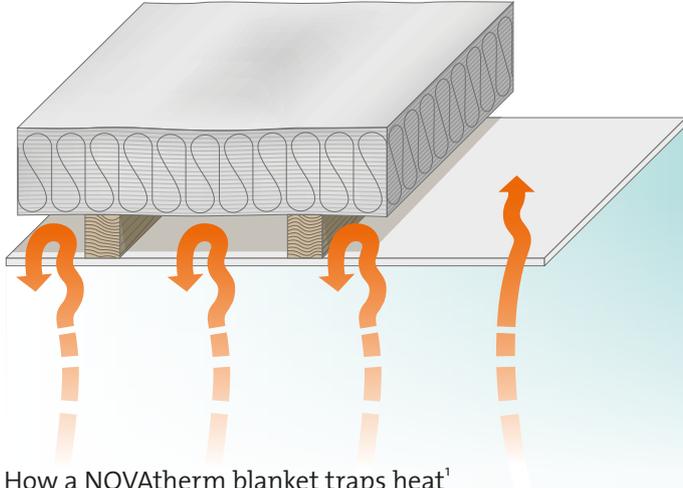
For information on using NOVATHERM in your walls, consult [www.insulpro.co.nz](http://www.insulpro.co.nz)

### What is insulation R-value?

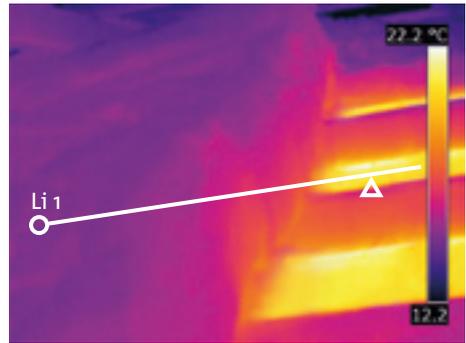
The R-value of insulation tells you how effective it is. A higher R-value gives greater insulation effect. Product R-values are determined by a standard laboratory test.

# Benefits of a NOVATHERM ceiling blanket

The thermal image here shows how heat is trapped by the blanket. A temperature spike of 7° was observed in the area without insulation as heat escaped into the ceiling.



Thermal imaging of NOVATHERM blanket



Temperature profile along line Li 1



The temperature spikes as heat escapes into area without insulation

¹ The area under the blanket is blocked off at the perimeter of the ceiling to stop airflow, as per best practice installation.

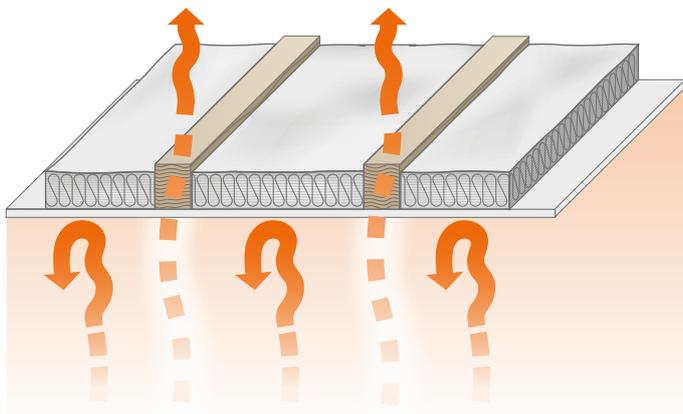
*“NOVATHERM ceiling blanket is the most effective ceiling insulation due to a minimum number of joints and coverage over the joists. It is a high quality durable product backed by InsulPro’s 50 year guarantee.”*

— Gleb Speranski, InsulPro Engineer

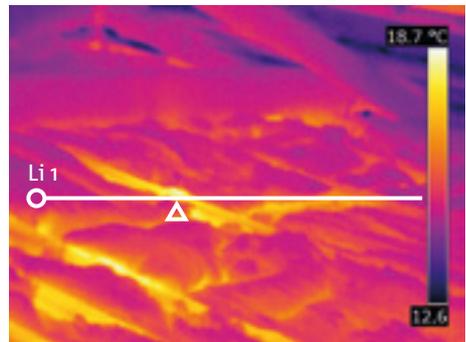


# Why blanket is best

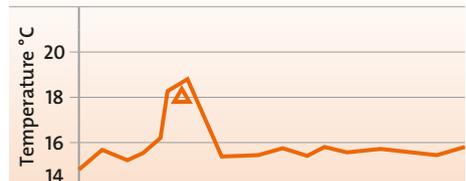
NOVATHERM blanket has less joints than segment insulation and covers over the ceiling joists. Without a blanket heat can escape through the joists themselves, as this thermal image shows.



Thermal imaging of insulation segments



Temperature profile along line Li 1



A temperature spike of nearly 4°C over the joist shows heat is escaping here

Ceiling joists can lose heat if not covered

InsulPro  
**NOVA**floor



## Heavy duty underfloor protection

While a blanket keeps you warm inside during winter, outdoors you need more heavy duty protection. That's why InsulPro developed NOVAfloor, the heavy duty underfloor insulation.

NOVAfloor is a high density polyester and has a thermal rating of R1.4. More importantly when it is installed in an underfloor environment it maintains its effectiveness under adverse conditions.

What's more, NOVAfloor's heavy duty formulation cuts out draughts coming up through the floorboards, and has excellent acoustic characteristics, especially in homes with exposed floor boards.

NOVAfloor is 100% safe. It won't irritate or make you itchy and gives off no fumes or odours. NOVAfloor is friction fitted snug up against the floor without the need for strapping or dangerous stapling that has caused deaths from electrocution.

InsulPro's state of the art manufacturing technology allows the amount of recycled fibre used in NOVAfloor to be maximized.



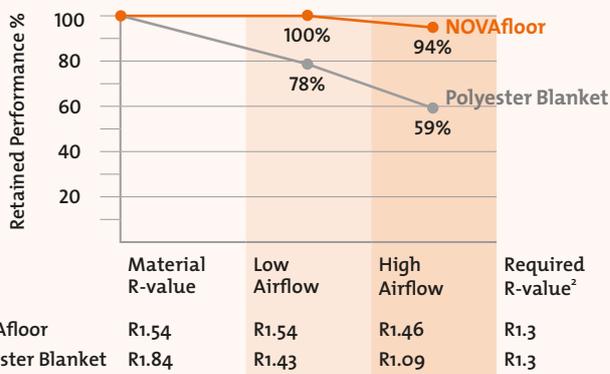
## Independent test results

While NOVATHERM works well in your ceiling NOVAfloor is purpose designed for under your house.

In a recent independent underfloor laboratory test, NOVAfloor's installed performance was superior to NOVATHERM blanket with a higher product R-value. That's because NOVAfloor is made from a high density polyester formulation that prevents airflow. Winds or draughts that are very common under New Zealand homes can substantially reduce effectiveness of blanket insulation installed under floor.

The test showed that under low airflow conditions the blanket dropped over 20% of its performance, and under high airflow it dropped over 40%. By contrast NOVAfloor retained its performance under low airflow conditions and even under high airflow still achieved above the R-value typically required to meet the New Zealand Building Code.

### Results of samples tested<sup>1</sup>: Installed underfloor performance relative to product R-value



NOVAfloor retained 94% performance while the polyester blanket insulation lost 41% of its R-value.

<sup>1</sup> Test results presented are for the samples of NOVAfloor and NOVATHERM tested.

<sup>2</sup> Typical R-value required by underfloor insulation to meet the New Zealand Building Code.



Devonport home owners Kris and Geraldine are enjoying the benefits of NOVAfloor.

*"The floor used to feel damp but we haven't noticed it this winter. Our house warms up more quickly and we don't get draughts through the floorboards anymore. There was an echo before when we walked around but now we don't hear anything.*

*We wanted a product that wouldn't crumble and fall down into our garage under the dining room. NOVAfloor is rigid and it doesn't sag. It feels like a fabric which makes it easy to handle."*

Kris and Geraldine have recommended NOVAfloor to a number of their friends.

*"Compared to all the other products we investigated, NOVAfloor is the best."*



# The NOVatherm product range

## Typical R-values required to meet the New Zealand Building Code

The New Zealand building code (section H1/AS1) divides the country into three zones for energy efficiency compliance. Zone boundaries are aligned with those of territorial authorities.

		Minimum Thermal Resistance of Building System	
Zone	Coverage	Ceiling	Floor
1	Northland, Auckland, Franklin and the Coromandel Peninsula	R 2.9	R 1.3
2	The North Island except the Central Plateau	R 2.9	R 1.3
3	North Island Central Plateau and all of the South Island	R 3.3	R 1.3

## NOVatherm Ceiling Blanket<sup>1</sup>

				Bale Pack Sizes			
Product	 Appraisal No.430 [2008]	 Licence number 2510069 Thermal (resistive-type) Building Insulants	Product R-value	Nominal Thickness (mm)	Dimensions (mm)	Pieces per pack	Total Area (m <sup>2</sup> )
NOVatherm R1.8	√		1.8	115	870 x 11490	2	20
NOVatherm R2.6	√		2.6	175	870 x 8620	2	15
NOVatherm R 2.8	√		2.8	175	870 x 8620	2	15
NOVatherm R 3.2	√		3.2	200	870 x 8620	2	15
NOVatherm R 3.6	√	√	3.6	225	870 x 7470	2	13

<sup>1</sup> NOVatherm can be made in a range of R values and sizes, contact InsulPro for more information.

## NOVAfloor Underfloor Insulation

Product	 Appraisal No.620 [2008]	 Licence number 2510069 Thermal (resistive-type) Building Insulants	Product R-value	Nominal Thickness (mm)	Dimensions (mm)	Pieces per pack	Total Area (m <sup>2</sup> )
NOVAfloor	√	√	1.4	55	1200 x 375	14	6.3
					1200 x 435	14	7.3
					1200 x 485	14	8.1
					1200 x 535	12	7.7
					1200 x 580	12	8.3

## Installation guidelines and other products

For more information on product installation and the NOVahush range of acoustic insulation, consult [www.insulpro.co.nz](http://www.insulpro.co.nz)

## Talk to a NOVatherm installer today

InsulPro has a network of EECA approved residential installers ready to put NOVatherm and NOVAfloor into your home. For your nearest installer consult [www.insulpro.co.nz](http://www.insulpro.co.nz) or call us on **0800 100 007**

Authorised NOVatherm Representative