



Insulation for Existing Homes

AUTEX



Over 40 years experience...

Autex Industries Limited was established in Auckland in 1967 and proudly remains a privately owned New Zealand company. Founded on innovation, Autex thrives on creating better, faster and more intelligent ways of doing things. When Autex recognised the need for a user-friendly alternative to the common fibreglass insulation, GreenStuf® the 'friendly fibre' made from 100% polyester was set in motion.

"Today, GreenStuf® insulation is among the most environmentally friendly insulation solutions on the market."

Polyester is one of the most commonly used fibres in the world and is renowned for its safety, durability and performance. More recently, polyester has been used in the development of high-tech outdoor thermal clothing such

as Polar fleece® because of its superior thermal resistance, breathability and incredible durability. These same benefits are found in Autex's GreenStuf® insulation.

You will find our insulation products being used in hospitals, schools, universities, offices, factories, apartments and homes all over New Zealand and Australia.

GreenStuf® is proudly manufactured in New Zealand to exacting specifications under strict ISO 9001 Quality Management Systems and has been fully appraised by BRANZ to meet all requirements of the New Zealand Building Code.



Warmth you can really feel™

We believe that it is important to be aware of the health issues linked to poor indoor air quality, so we test all of our insulation products to international standards to provide independent assurance that our products are safe.



“Breathe easy. GreenStuf® insulation is a non-irritant, non-toxic and non-allergenic fibre that cannot be breathed into your lungs.”

Feeling home sick?

Many New Zealand homes have inadequate insulation and are cold and damp as a result. Better insulation means warmer, drier and healthier homes that will be easier and more cost effective to heat. Insulation is especially important for people with respiratory illness or other conditions brought on by living in cold, damp houses.

Recent studies in New Zealand have found a definite link between insulation and health. The Wellington School of Medicine and Health Sciences study showed the following:

- A significant drop in energy use when the houses were insulated.
- Once the houses were insulated they were drier and warmer.
- People in insulated houses reported them ‘significantly warmer’.
- There was a significant improvement in the self-reported health of those living in the insulated houses compared to those whose houses were not insulated.
- Adults and children in insulated houses reported visiting their GP less.
- Adults and children in insulated houses reported that they were admitted to hospital less often for respiratory conditions.
- People in insulated houses reported less visible mould inside their homes.



Breathe Easy

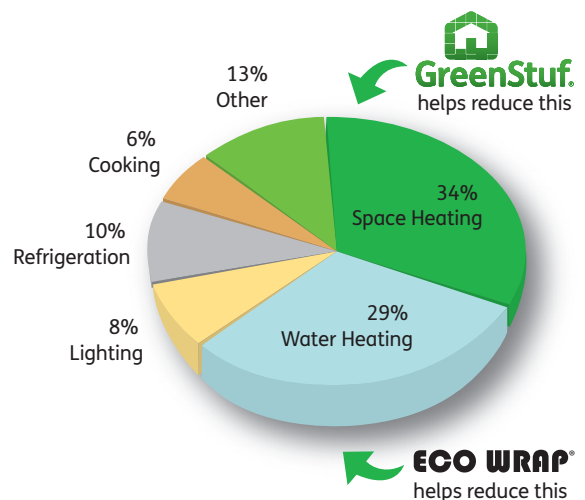
GreenStuf® insulation has been independently assessed by Asthma New Zealand and accepted into their Breathe Easy programme. GreenStuf® is recognised as a safe, non-toxic and non-allergenic insulation that reduces the triggers of respiratory illnesses.



Insulating your Pocket

In the last decade electricity costs have increased significantly. You can reduce the effect of future rises by choosing better insulation in your home today. A fully insulated house needs about half the heating of an uninsulated house. In fact, paying a bit more for insulation now will save you money well into the future. The increased savings each year will eventually pay for the insulation that will continue saving you money, year after year.

This diagram shows how a typical household electricity bill is split and how you can save money with GreenStuf® Insulation.



Save up to \$1300 on GreenStuf® Insulation

Now is the perfect time to upgrade your home with insulation and access funding from the Warm Up New Zealand: Heat Smart programme.



Warm Up New Zealand: Heat Smart programme

The ENERGYWISE® funding programme is a government initiative aimed at improving the energy efficiency of New Zealand homes. It provides funding to help homeowners and landlords upgrade the insulation in homes built before 2000.

Who is Eligible?

- Funding is only available for houses built before January 1st 2000
- Applications for funding must be made by the homeowner
- Funding is not available for Housing New Zealand homes
- Funding is limited; so don't delay or you could miss out

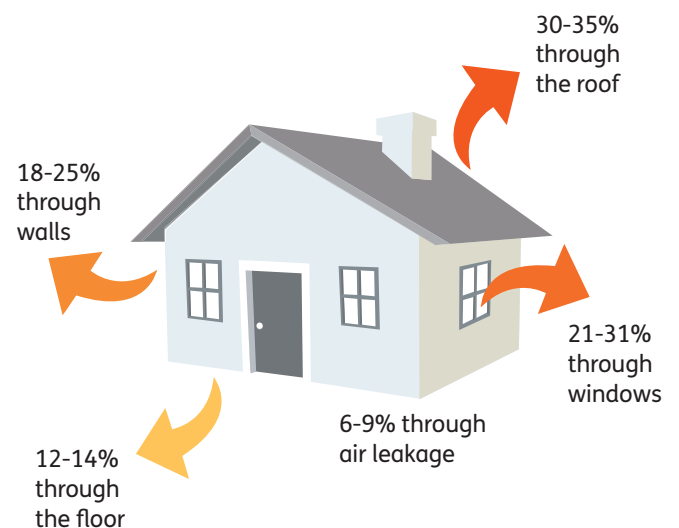
Why Insulate?

Insulating your home is the single most effective thing you can do to keep your home warm and to save energy and money. A well insulated home provides year-round comfort; it is cooler in the summer, warmer in the winter. A warmer home is a drier, healthier home.

“Around 900,000 houses in New Zealand have insufficient or no insulation. Our indoor temperatures fall well below World Health Organisation recommended limits as a result.”

Already over 100,000 New Zealand households have improved the insulation of their homes through Warm Up New Zealand: Heat Smart. When asked about the impact it had, a massive 84% noticed they had a warmer home after the insulation was installed. A number of people have also noticed a real health benefit, including those with asthma.

Heat Loss in an Uninsulated House



GreenStuf®

Warmth you can really feel™

New Zealand Made

GreenStuf® products are made by Autex Insulation under an ISO 14001 certified Environmental Management System. Manufactured using a low energy and zero waste production process, GreenStuf® is among the most environmentally friendly insulation solutions on the market.



“We are so confident in the quality of manufacture and performance of our products that we offer a 50 year product durability warranty.”

Environmental Choice

Initiated and endorsed by the New Zealand Government, Environmental Choice New Zealand (ECNZ) recognises genuine moves made by manufacturers to reduce the environmental impacts of their products. It provides a credible and independent guide for consumers who want to purchase products that are better for our environment. Autex Insulation proudly carries the ECNZ tick on appraised GreenStuf® products. For more information visit: www.enviro-choice.org.nz



Low VOC and Completely Safe

GreenStuf® has been classed as low VOC which means there are no risks to you during or anytime following installation. Some other insulation products commonly available in New Zealand are made with bonding agents which contain cancer causing chemicals, in particular formaldehyde.

The thermal bonding process used on our products means the insulation material is self-supporting in walls and ceilings and won't break down over time. With no nasty chemicals and polyester fibres that are not of a respirable size, there are no special precautions for safely handling and installing GreenStuf® products. All GreenStuf® products are identified as both non-irritant and non-toxic. That means no nasty itching, scratching and ongoing health risks. GreenStuf® is completely safe for everyone, including those living with asthma.

Fire Safe

GreenStuf® Insulation products exceed all of the New Zealand Building Code (NZBC) Early Fire Hazard requirements. GreenStuf® is a self-extinguishing product as tested under AS1530.3. When exposed to a naked flame GreenStuf® will simply melt away from the flame and self-extinguish.

Previously Recycled and Recyclable

GreenStuf® is made from only 100% polyester fibres with a minimum 45% recycled content from used and recycled PET plastics.



“The thermal bonding process allows GreenStuf® insulation to be further recycled and used again. Autex will also gladly recycle used, uncontaminated GreenStuf® and help keep it out of landfill.”

For more information on GreenStuf® recycling, contact Autex on Freephone 0800 428 839



GreenStuf®

Warmth you can *really* feel™

GreenStuf® for your Home

We all desire a warm, comfortable home, but many New Zealand houses are difficult and expensive to heat to healthy temperatures. Around 35% of the energy used in the average New Zealand household goes on heating alone. If your home doesn't have adequate insulation (like the majority of our homes), a lot of your heat is wasted.

Improving your home's ability to retain heat and the smart use of a clean efficient heating system, will make your home more cost-effective to run and warmer and healthier to live in. Good insulation makes a big difference to a home's warmth, comfort and health. Unfortunately, nearly 60% of New Zealand homes have inadequate ceiling and under floor insulation.

Many homes built before insulation became mandatory in 1978 have no insulation at all. In other cases the insulation may have been in place for years and is either not working properly or is well below today's standards. Either way, there is a good chance your home will benefit from more insulation.

If you have no insulation, your ceiling should be your first priority as this is where most of your heat will be lost. Secondly, insulate under your floor - if the floor is cold, you will feel cold. If you already have some ceiling insulation, insulate your floor before topping up the ceiling.

Wall insulation is relatively difficult to install in an existing home as the wall lining or cladding needs to be removed in order to do it. During renovations is a good time to tackle this.

Using better insulation is better for us all and a good indicator of the product's thermal performance is the insulation's R-Value. The R-Value is based on the product's ability to reduce heat flow. The higher the R-Value, the better the insulation performs, however it's effectiveness also depends on where and what form of insulation is used. The following table compares the minimum R-Values required depending on the insulation type and area insulated.

Minimum Insulation R-Values for Existing Homes

| | North Island, excluding the Central Plateau | South Island and the Central Plateau |
|---|--|--|
| Ceilings with less than 75mm of existing insulation | R2.8 blanket insulation or R3.4 segment products | R3.2 blanket insulation or R4.0 segment products |
| Ceilings with 75mm -120mm of existing insulation | R1.8 blanket insulation | R2.4 blanket insulation |
| Underfloor | R1.4 anywhere in New Zealand | |
| Walls | Check the thickness of your wall cavity and find the highest R-value product at that thickness | |



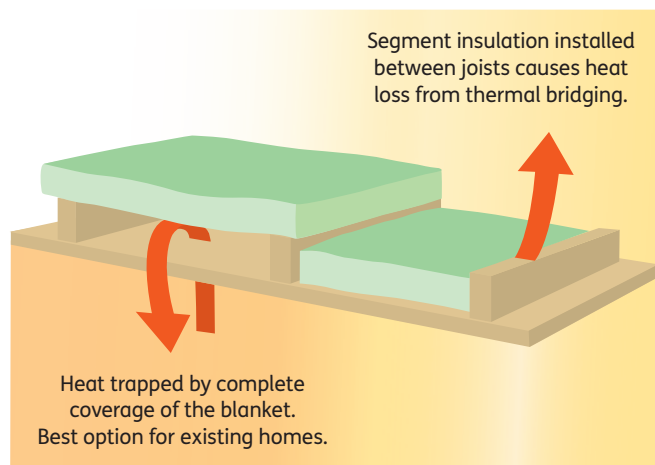
Rest assured, GreenStuf® is backed with a 50 Year Durability Warranty. Have confidence knowing GreenStuf® won't reduce its performance over time.

Ceiling

Well planned and correctly installed, GreenStuf® Ceiling insulation will help make your home warm, dry and energy efficient. Insulating with GreenStuf® Ceiling insulation will trap heat inside your home for winter warmth and keep summer heat out for year round comfort.

“Installing ceiling insulation can save you up to \$400 a year on home heating costs in the colder regions of New Zealand”

Blanket insulation (roll form) or segment (pre-cut slabs) are both designed to insulate ceilings, however GreenStuf® installed as a blanket covering the ceiling joists is the best option for existing homes. This will reduce thermal bridging (heat loss through timber) as demonstrated in the diagram below.



Blanket insulation is also quick and simple to install. Visit www.greenstuf.co.nz to view our “how to” installation videos.

Under Floor

If you need under floor insulation, we have specifically designed GreenStuf® Underfloor for exposed floor joists. GreenStuf® Underfloor is another blanket-type insulation that is easy to handle and definitely not a ‘hard’ option.

There is no tricky cutting or trimming to fit, so no mess and no fuss. Simply stapled into place between the joists without the need for clips or tape, GreenStuf® Underfloor will significantly reduce heat loss and drafts caused by joins in the floor — you’ll have warmer feet and a warmer home.

“GreenStuf® Underfloor is designed with flexibility in mind and is perfect for use in between variable joist spacings — a common occurrence in most older New Zealand homes.”

Cut your Hot Water Heating Bill

GreenStuf® ECO Wrap® is a non-irritant thermally efficient insulation wrap designed for older electric hot water cylinders.

Thermally efficient water heating saves energy costs and the Energy Efficiency and Conservation Authority (EECA) estimate that wrapping an older cylinder can save you up to \$80 per year in water heating costs.

If your hot water cylinder is warm to touch, it's losing energy. We recommend a GreenStuf® ECO Wrap® which will reduce heat loss and help your hot water stay hotter for longer.

Warmth head to toe

GreenStuf® Underfloor insulation will reduce heat loss and drafts caused by joins in the floor creating a warmer and healthier home. Best of all its completely safe for you, your family and our environment.

