

REDEFINING THE POWER OF PLASTIC.

The non-toxic, 100% recycled, fibreglass-free
thermal insulation solution.



WHERE OTHERS SEE WASTE, WE SEE OPPORTUNITY

Humankind's imagination has created great innovation and, in turn, great waste. The challenge is, through the reuse of imagination, to recycle this waste into products that enhance lives and preserve our environment.

ISOTHERM Thermal Insulation is one such product. Millions of plastic PET bottles are thrown away into rubbish dumps and landfill sites every year. Instead of polluting our environment, these plastic bottles are collected, recycled and converted into ISOTHERM Thermal Insulation to be used to insulate buildings throughout Africa.



INNOVATION BEYOND GREEN



ISOTHERM complements the architectural and construction practice of 'green building' by increasing the energy efficiency of buildings and reducing the impact buildings have on human health and the environment. By its very definition ISOTHERM is an energy efficient product, reducing the warming and cooling needs of interiors. It is not only made from recycled PET, but is itself 100% recyclable.



BEAT THE ENERGY CRISIS

- South Africa is in the midst of an energy crisis.
- Buildings consume 40% of South Africa's energy.
- An un-insulated building loses as much as 35% of its energy via its ceiling.

ISOTHERM Thermal Insulation in ceilings and on geysers and water pipes can greatly reduce energy consumption and cost, while regulating indoor temperatures for ultimate comfort.

In accordance with the global trend to regulate the design and construction of buildings for maximum energy efficiency, South Africa has recently updated The National Building Regulation (most specifically SANS 10400).

The new regulation stipulates that all new buildings or additions and alterations to existing buildings must comply with energy-efficient standards; including the insulation of floors, walls, windows, ceilings and roofs.



ACOUSTIC



THERMAL



RECYCLED



ENERGY SAVING



SAFE TO TOUCH

Insulation specifications vary according to the climatic zone and its required Total R-value.

- ZONE

CLIMATIC CONDITIONS
- 1

Cool Interior
- 2

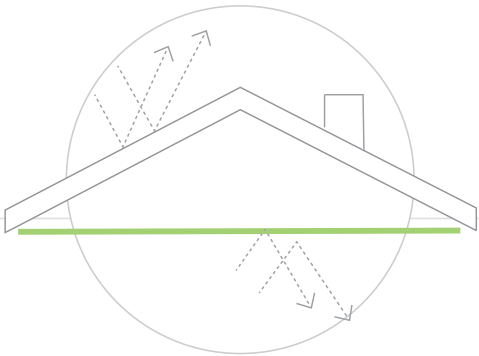
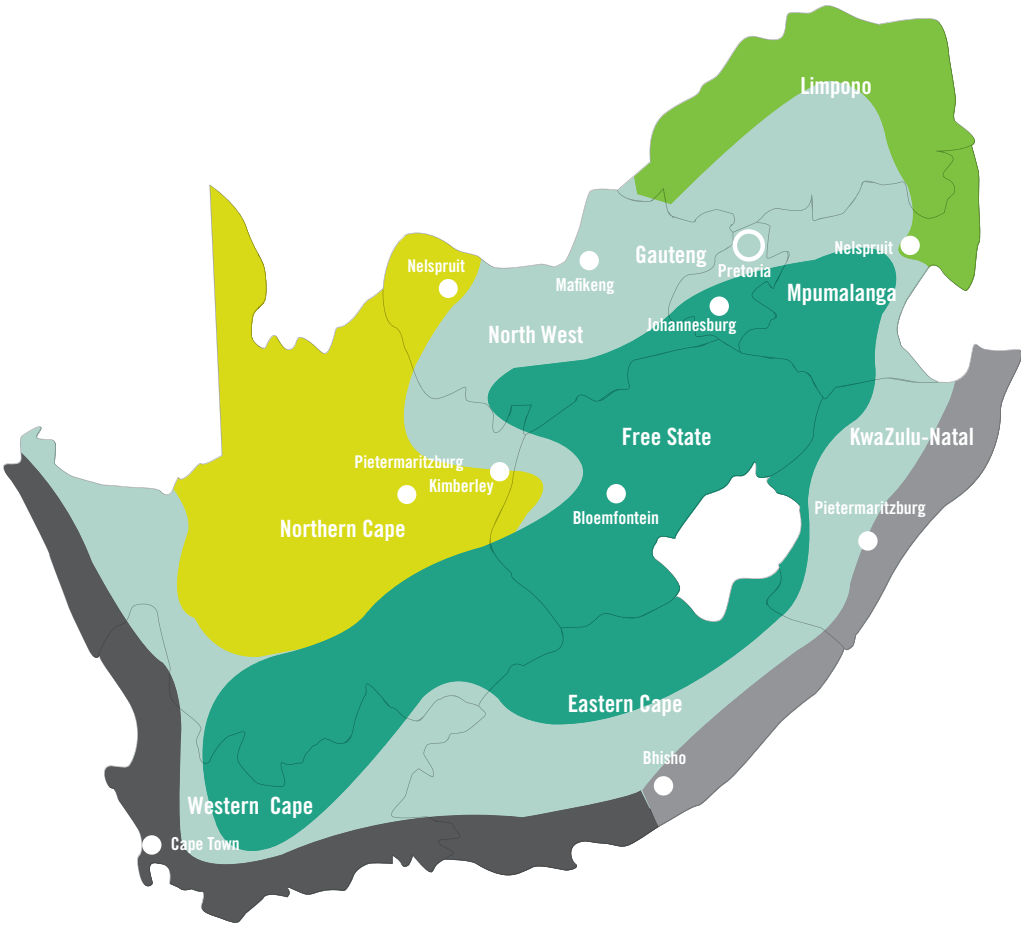
Temperate Interior
- 3

Hot Interior
- 4

Temperate Coastal
- 5

Sub-tropical Coastal
- 6

Arid Interior



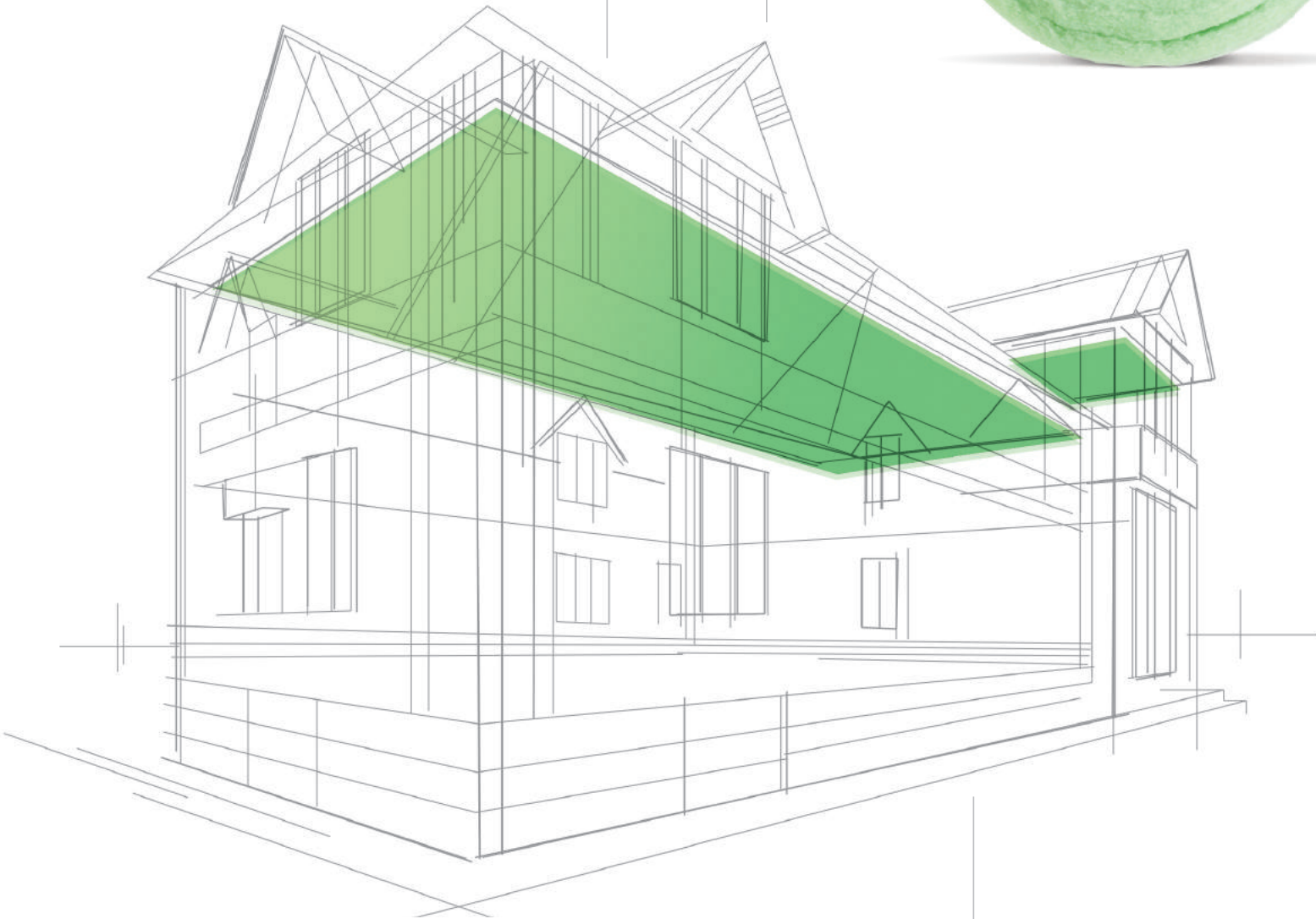
WHAT IS R-VALUE?

The R-value is the measure of an insulation product’s ability to restrict heat transfer. It is thus indicative of an insulation product’s thermal insulation performance. The higher the R-value the better the performance and effectiveness of the insulation product. The R-value of ISOTHERM Thermal Insulation and the R-value of the roof and ceiling assembly are added together to give the Total R-value. The new SANS 10400 requirements specify Total R-value.

| CLIMATIC ZONE | 1 | 2 | 3 | 4 | 5 | 6 |
|--|------|------|------|------|------|------|
| Minimum required Total R-value (SANS 10400 XA) | 3,7 | 3,2 | 2,7 | 3,7 | 2,7 | 3,5 |
| ISOTHERM R-value | 3,37 | 3,14 | 2,33 | 3,37 | 2,33 | 3,14 |
| ISOTHERM thickness (in mm) | 145 | 135 | 100 | 145 | 100 | 135 |
| Total R-value (incl. ceiling and roof materials) | 3,77 | 3,54 | 2,73 | 3,77 | 2,73 | 3,54 |

COST-EFFECTIVE COMFORT

ISOTHERM pays for itself by reducing the electricity costs of energy-consuming heating and cooling systems.



Insulate roofs, geysers and water pipes with **ISOTHERM** Thermal Insulation to keep your home warm in winter and cool in summer.



SAFE TO INSTALL, EASY TO USE

The soft texture of ISOTHERM makes it easy to roll out and cut to size. Pleasant to touch, ISOTHERM is simple and safe to install. It is non-allergenic, non-irritant and resilient and does not support the spread of flame.

ISOTHERM IS ACCREDITED



Brits Nonwoven (Pty) Ltd, the manufacturers of ISOTHERM, are a fully-accredited member of the **Thermal Insulation Products & Systems Association SA (TIPSASA)** and ISOTHERM Thermal Insulation is **Agrément South Africa** certified. Furthermore, ISOTHERM passes all criteria covered by **SANS1381-1:2013**.

All Brits Nonwoven facilities are **ISO9001:2008** quality system certified and are in the process of officially obtaining the **ISO14000:2015** environmental system accreditation.



THE NO-MAINTENANCE SOLUTION

ISOTHERM is resistant to condensation and associated fungi and bacteria. It retains loft and will not collapse over time.

HOW TO INSTALL YOUR ISOTHERM

BASIC INSTALLATION GUIDELINES

- Measure accurately. Measure the distance between the roof beams or roof trusses and then select the correct roll of ISOTHERM.
- Trim ISOTHERM to specific sizes before entering the roof space. This is easily done - tear or cut it with a pair of industrial scissors or shears.
- Do not walk on the ceiling boards. Take care to only walk on crossbeams, truss ties or balancing boards.
- Position ISOTHERM correctly. Place ISOTHERM above and in close contact with the ceiling; fit snugly between the roof beams and trusses.
- Ensure continuous insulation. Carefully butt the ends of the rolls or lap to ensure maximum effectiveness.
- Allow a 150mm gap around flue pipes, ceiling fans and recessed lights.
- Wrap ISOTHERM around geysers and water pipes for further energy saving. Continue this installation process until the ceilings are completely insulated.



- Do not block ventilation points with insulation. This includes eaves gaps and air bricks at gable ends. Keep clear to ensure that the airflow is maintained.
- Do not waste off-cuts. Use them wisely - fill in gaps, crevices and corners.
- Do not put ISOTHERM in direct contact with metal chimney fabrications or flues passing through the loft space.
- Do not forget to insulate under the geyser and above the trap door.



GOOD TO KNOW

*No protective clothing or respirators are needed when installing **ISOTHERM**. It is made from the same raw material used in common household textiles and clothing and is non-irritant and non-toxic.*

DON'TS

FREQUENTLY ASKED QUESTIONS

Does the R-value of ISOTHERM Thermal Insulation meet the stipulated requirements of the new SANS 10400 XA regulations? Yes, installing the correct thickness of ISOTHERM for the climatic zone exceeds the required R-values as specified by SANS 10400 XA.

Does ISOTHERM Thermal Insulation have acoustic insulation qualities? Yes. ISOTHERM has acoustic properties and will dampen ambient sounds such as wind noise and rainfall.

Is ISOTHERM Thermal Insulation flammable?
No. ISOTHERM has been fire tested to classification B/ B1/2 and is safe for use in both residential and commercial applications. It will not contribute to the spread of flames and the product will self-extinguish when the heat source is removed.

What happens if ISOTHERM Thermal Insulation gets wet?
ISOTHERM is made from polyester so it will not absorb water or moisture, and will dry naturally should it be exposed to small amounts of water.

Is ISOTHERM Thermal Insulation safe for people with allergies?
Yes, ISOTHERM is safe for people who suffer from allergies. The product is made from the same raw material used in common household textiles and clothing, and is non-allergenic, non-irritant and non-toxic.

Is ISOTHERM recyclable? Yes. ISOTHERM is made from recycled PET polymer and is itself 100% recyclable.

Where can I buy ISOTHERM Thermal Insulation?
Visit www.isootherm.co.za for product information and a list of our stockists.

| THICKNESS | DENSITY IN KG/M3 : | THERMAL RESISTANCE (R-VALUE) | TOTAL R-VALUE (incl. CEILING AND ROOF MATERIALS) | AVAILABLE SIZES (LENGTH) | AVAILABLE SIZES (WIDTH) | CLIMATIC ZONE |
|-----------|--------------------|------------------------------|--|--------------------------|-------------------------|---------------|
| 40mm | 10kg/m3 | 0.82 | 1.22 | 10m | 75cm or 120cm | - |
| 50mm | 10kg/m3 | 1.02 | 1.42 | 10m | 75cm or 120cm | - |
| 75mm | 10kg/m3 | 1.53 | 1.93 | 8m | 75cm or 120cm | - |
| 100mm | 10kg/m3 | 2.04 | 2.44 | 6m | 75cm or 120cm | - |
| 100mm* | 11,5kg/m3 | 2.33 | 2.73 | 6m | 75cm or 120cm | 3 & 5 |
| 135mm* | 11,5kg/m3 | 3.14 | 3.54 | 5m | 75cm or 120cm | 2 & 6 |
| 145mm* | 11,5kg/m3 | 3.37 | 3.77 | 5m | 75cm or 120cm | 1 & 4 |

* SANS 10400XA Energy Efficiency in Buildings Compliant



Innovation Beyond Green

Made from 100% recycled plastic PET bottles, **ISOTHERM** is the safest, easiest way to keep you warm in winter, cool in summer and comfortable all-year round.

Contact ISOTHERM:

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