



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

CHALLENGE

- 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.



SOLUTION

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



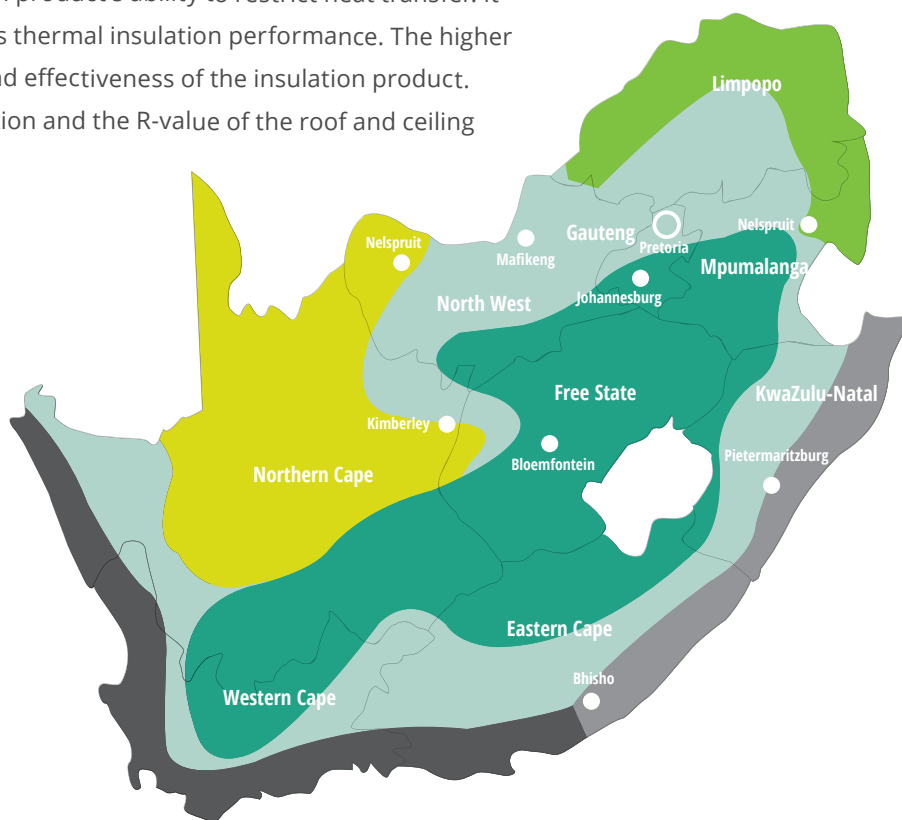
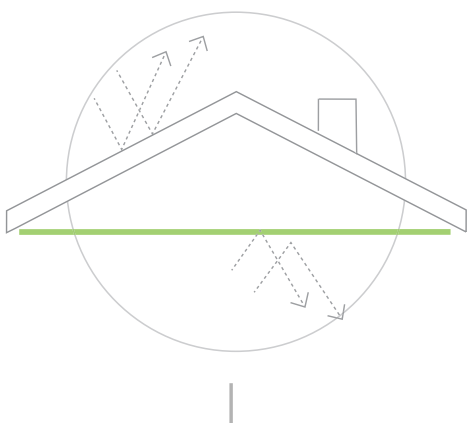
**ENERGY
SAVING**



**SAFE TO
TOUCH**

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.



ZONE CLIMATIC CONDITIONS

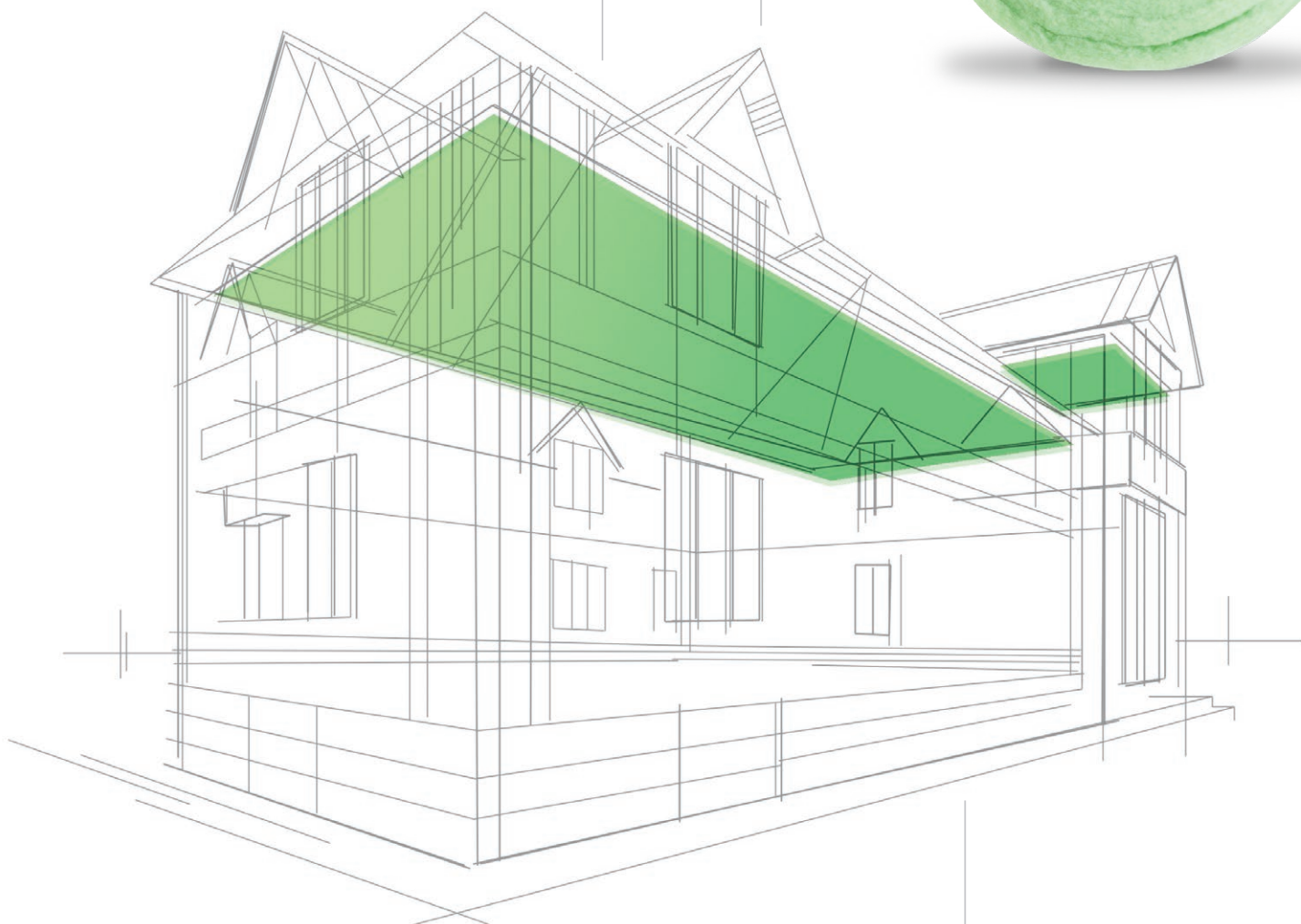
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|----------------------------|-------------------------------|------------------------|
| 1 Cool Interior | 2 Temperate Interior | 3 Hot Interior |
| 4 Temperate Coastal | 5 Sub-tropical Coastal | 6 Arid Interior |

Insulation specifications vary according to the climatic zone and its required 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 at 11,5kg/m ³ density)	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.



THE NO-MAINTENANCE SOLUTION

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

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.



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.

HOW TO INSTALL YOUR ISOTHERM

BASIC INSTALLATION GUIDELINES

DO

- 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.



DONT

- 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.



INSTALLATION SPECIFICATIONS

THICKNESS	DENSITY	AVAILABLE SIZES (LENGTH)	AVAILABLE SIZES (WIDTH)	CLIMATIC ZONE	PRODUCT R-VALUE	TOTAL R-VALUE INCL. ROOF & CEILING ASSEMBLY
40mm	8.5kg/m ³	10m	75 or 120cm	N/A	0,63	1,03
50mm	8.5kg/m ³	10m	75 or 120cm	N/A	0,79	1,19
75mm	8.5kg/m ³	8m	75 or 120cm	N/A	1,18	1,58
100mm	8.5kg/m ³	6m	75 or 120cm	N/A	1,57	1,97
100mm	11.5kg/m ³	6m	75 or 120cm	3 & 5	2,33	2,73
135mm	11.5kg/m ³	5m	75 or 120cm	2 & 6	3,14	3,54
145mm	11.5kg/m ³	5m	75 or 120cm	2 & 6	3,37	3,77

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.isotherm.co.za for product information and a list of our stockists.



ISOTHERM

Thermal Insulation

Innovation Beyond Green

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

Contact **ISOTHERM**
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SABS
 ISO 9001

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