

Insulation is a standard part of any building project. The National Building Regulations require new buildings and additions that need plan approval to include thermal insulation, and a well insulated building costs less to heat and cool for its whole life. JUMBO Insulation does both, it holds indoor temperatures steadier and cuts the energy a building uses.

Know the legislation

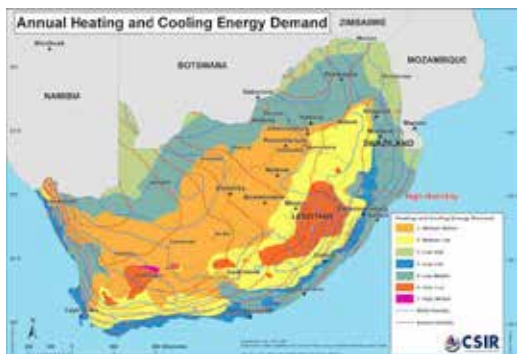
Two national standards govern energy use in buildings:

- SANS 10400-XA, energy usage in buildings.
- SANS 204, energy efficiency in buildings.

Thermal insulation is compulsory in the design of any new building with a floor area over 80 m². It is not enough to add insulation on its own. The whole roof assembly, meaning the roof covering, the ceiling and the insulation together, must meet a minimum total thermal resistance, expressed as an R-value. New buildings and extensions must comply.

SANS 10400-XA was revised in November 2021. That revision replaced the old six climate zones with seven energy zones, and set a simpler roof requirement:

- 3.7 m².K/W total roof R-value across energy zones 1 to 7, which covers almost all of South Africa.
- 2.7 m².K/W in Zone 5H, the high-humidity coastal strip that includes Durban.



Energy Zone

	1		2		3		4		5		6		7	
									5		5H			
Heating & Cooling	H	C	H	C	H	C	H	C	H	C	H	C	H	C
Low, Medium, High	M	M	M	L	L	H	L	L	L	M	L	M	H	M

NOTE: Zone 5h high humidity to be taken into account

How R-value works

R-value is the measure of a material's resistance to heat transfer, also called thermal resistance. The higher the R-value, the better the insulation. The roof figures above are total R-values, so they include the small contribution from the roof covering and the ceiling, usually around 0.35 m².K/W. The insulation layer provides the rest.

The JUMBO Insulation range

Thickness	R-value (m ² .K/W)	Roll length	Area per roll (1.2 m wide)	Colour
50mm	0.90 to 1.15	10m	1.20 m ²	Green
100mm	1.75 to 2.20	6m	1.20 m ²	Yellow

Density 10.1 kg/m³. Made from 80% recycled PET. R-values are South African values, tested to ASTM C517.

Features and Benefits

- SABS approved to SANS 1381-1:2007, permit number 9486/15037.
- Made from 80% recycled PET, and fully recyclable at the end of its life.
- Does not absorb water, and dries naturally to regain its resistance and density.
- Non-toxic, no chemical additives, completely odourless.
- Resists bacteria, fungi and mildew, and insects will not eat it.
- Maintenance free, holds its loft and does not degrade over time.

Reaction to fire: Class B/B1/2 to SANS 428. The material is combustible above 750 degrees (SANS 10177-8), but it does not contribute to the spread of flame and self-extinguishes when the heat source is removed.

Meeting the roof requirement

A single 50 mm or 100 mm layer does not reach the total roof R-value on its own. JUMBO Insulation suits top-up work, where a home already has some insulation but needs more to meet the standard, and lighter thermal jobs. Layers can also be combined to build up the R-value.

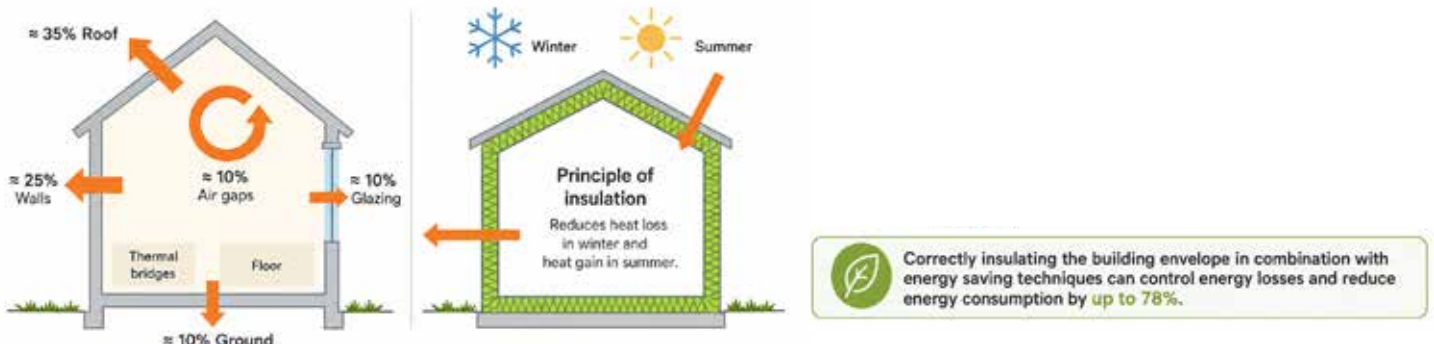
The right insulation matters

A well insulated building stays more comfortable through the year, cutting cooling and heating costs and reducing greenhouse emissions. JUMBO Insulation keeps a building cooler in summer and warmer in winter, and saves on electricity all year round. Spend a little more today and save year after year.

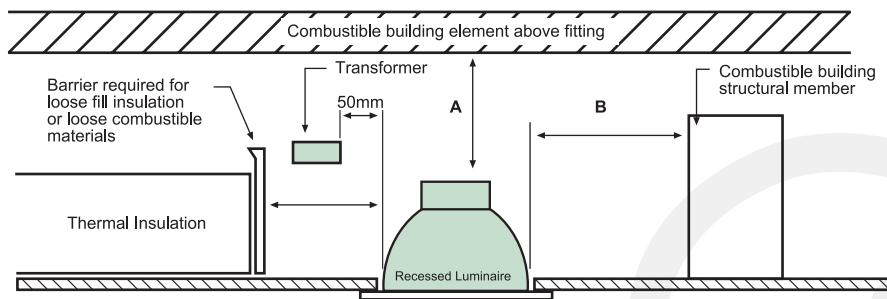
Installation

Measure the spacing between the trusses, joists or studs and use the matching roll width. Butt or lap the ends of the rolls so the insulation is continuous with no gaps. Leave a 50 mm gap around downlighters, recessed lights, flue pipes (for fire-places, stoves or gas heaters) and other low heat sources.

40% of SA total energy currently used in buildings



Installation Guidelines



Default Minimum Clearances for Recessed Luminaires		
Dimension	Incandescent lamp	Halogen lamp
A - clearance above luminaire	50 mm	200 mm
B - side clearance to structural member	100 mm	200 mm
C - clearance to thermal insulation	50 mm	200 mm
D - clearance to supply transformer	50 mm	



Manufactured by
Platinum Fibre (Pty) LTD
who is a member of TIASA