

IsoBoard thermal insulation is a high density, rigid, extruded polystyrene insulation board, having a 100% closed cell structure. IsoBoard has been tried and tested internationally since 1970, and manufactured in South Africa since 1995, using a fully automated extrusion process, in accordance with international specifications and standards.

Attributes:

The use of advanced, state of the art manufacturing technology makes it possible to guarantee exceptional attributes, such as:

- * Low thermal conductivity
- * High resistance to water vapour diffusion and water absorption
- * Uniform density distribution
- * Very high compressive strength
- * Ageing resistance as well as resistance to bacteria and micro organism growth.

These and many other features make ISOBoard an innovative and cost effective alternative to conventional insulation products. This versatility means that ISOBoard is used in various applications in numerous different markets.

Properties:

Heat Flow: IsoBoard is designed to provide resistance to heat flow. IsoBoard reduces heat flow into buildings in summer and reduces internal heat outflow during winter.

The **heat flow resistance** will reduce over time when exposed to air and will also be influenced by water content. Accordingly, a design heat flow value of 0.03 W/m²C is appropriate.

Water: IsoBoard will only absorb 0.20% water by volume. Heat flow resistance will reduce by a maximum of 3%.

Water Vapour: IsoBoard's closed cellular structure provides exceptional resistance to water vapour permeability. Heat flow resistance due to vapour penetration can reduce by a maximum of 8%.

Fire: IsoBoard contains self-extinguishing fire retardants and will not propagate fire in exposed roof applications as certified by the CSIR. See reports on website.

Sound Insulation: IsoBoard is designed as a thermal insulator and should not be used in isolation to achieve noise reduction. Consult a specialist with respect to noise reduction systems.

IsoBoard has a high density of 34-36 Kg/m³. The compressive strength ranges from 160 to 310 kPa, dependant on the thickness of the board. The thicker the board, the higher the compressive strength.

IsoBoard is odourless, chemically inert and does not supply nutrition for pests, or support micro organism growth. Operating Range: IsoBoard is designed for a temperature environment of -30 to +60°C.

Energy Savings Up To 40%

Installation Alternatives:

In a warm temperate environment such as found in South Africa, resisting heat flow inwards through the roof is the primary purpose of insulation. IsoBoard can be installed in a variety of applications to effectively meet this objective:

- * **Over purlin** for retail, commercial, industrial and residential steel frame roof applications.
- * **Inverted Roof** for concrete roofing systems where insulation is installed over waterproofing.
- * **Under soffit** installed below a concrete deck where an inverted roof is inappropriate.
- * **Nail up ceilings** replacing existing ceiling systems with an insulated ceiling.
- * **Over rafter** for residential and low cost housing applications.
- * **Over truss** for retail, commercial and residential exposed wooden truss applications.

IsoBoard is employed in other building applications with the objectives of energy cost savings and comfort:

- * **Cavity wall (Guide 1.2)** to maintain a constant internal building temperature.
- * **Under surface bed (Guide 1.5)** to insulate heated or cooled floors from the earths temperature.
- * **Under soffit (Guide 1.4)** above exposed parking areas to insulate retail and residential environments from "cold foot syndrome".

Order Options:

Surface Finishes: Plain, 100 mm centre grooved or edge bevelled.

Width: standard 600 ± 2 mm.

Stock Length: 8.0m, 6.0m, 4.8m (and halves). Tolerance ± 5mm. Manufacture to specific lengths, +50m3, 4 weeks lead time.

Thickness: 25, 30, 40, 50mm stock Tolerance ± 2mm.

Edge Profiles: Tongue & Groove, Shiplap, Straight edge.

Colour: White.

