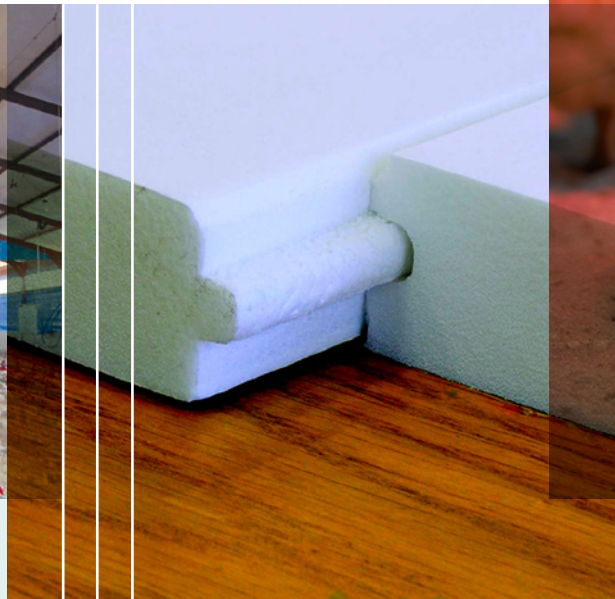


Proven Thermal Insulation for the Poultry Industry.

**ISO BOARD**<sup>®</sup>  
Produced by Isofoam SA (Pty) Ltd Reg no: CK 95/03956/07

*It's a whole new season*



Whether involved in broiler or egg production, chick rearing or turkey breeding, poultry farmers can optimize production and profits by creating a controlled environment with IsoBoard Thermal Insulation.

With well over one million square meters of IsoBoard installed in the Poultry Industry since 1995, IsoBoard is the **proven** thermal insulation for poultry applications.





“Voordat isoBoard geïnstaleer is kon ek snags die hokke hoogstens tot 25°C verhit. Met IsoBoard kon ons in Juniemaand die mikpunt temperatuur van 30°C–34°C maklik bereik. Mortaliteit het met 50% per siklus verminder. Die sewe-dagse mortaliteit het met 66% verminder omdat konstante temperatuur in die hok gehandaf word.

“Die besparing op verhitting was effektiewelik 34% per siklus gedurende die winter maande. Daar is nie meer kondensasie wat nattigheid op die vloer veroorsaak nie. Daar is ‘n vermindering van ammoniak en Hockburn.

“Nadat IsoBoard geïnstaleer is, het voeromset met 2-3% verbeter, ‘PEF’ het in somermaande vanaf 234.1 tot 261.6 verbeter en gedurende die winter vanaf 212 tot 221.9.”

**David Botha**  
Mooifontein Plaas, Kendal



## IsoBoard for Profitability

**Bird Mortality.** IsoBoard reduces bird mortality by reducing the effect of extreme temperature fluctuations. At a prominent broiler operation in kwaZulu-Natal it was demonstrated that higher levels of thermal insulation significantly reduce bird mortalities. Recording was done over three summers with birds of equal age, locality, feed regime, house design ventilation etc.

**The results are as follows:**

**(Average % Flock Mortality per °C deviation above mean maximum temperature):**

- IsoBoard (30 mm): 1.2
- Reflective Foil or bubblefoil: 3.2

**Energy Savings.** IsoBoard reduces ceiling heat loss in cold weather and lowers heating and energy bills.

**Many reports of cost savings have been received:**

- Heating cost savings of a prominent Limpopo Province broiler operator paid for the retro-fixing of IsoBoard within three years.
- A Farmer in Mpumalanga reported a 34% reduction in LPG gas consumption per cycle after installing IsoBoard as compared with previous years.

**Feed Conversion Rate.** With controlled and stable temperatures, feed conversion rates for broilers improve. During the cold winter months reduce feed consumption by controlling air temperature to higher levels.

**Egg Mass.** Studies over many years have demonstrated that for any breed of bird, controlled air temperature positively influences egg size and laying rates.

**Bird Mass.** Studies by Siegal and Drury confirm that if the amplitude of temperature fluctuation is reduced from 16.6°C to 5.5°C over the life of broilers, the mass gain of the bird is 14–25% greater.

**Bacteria.** Sample swabs taken from two poultry houses after cleaning and disinfection; testing for microbe activity as per test method SJM 09:35.

**Results from an independent laboratory were as follows:**

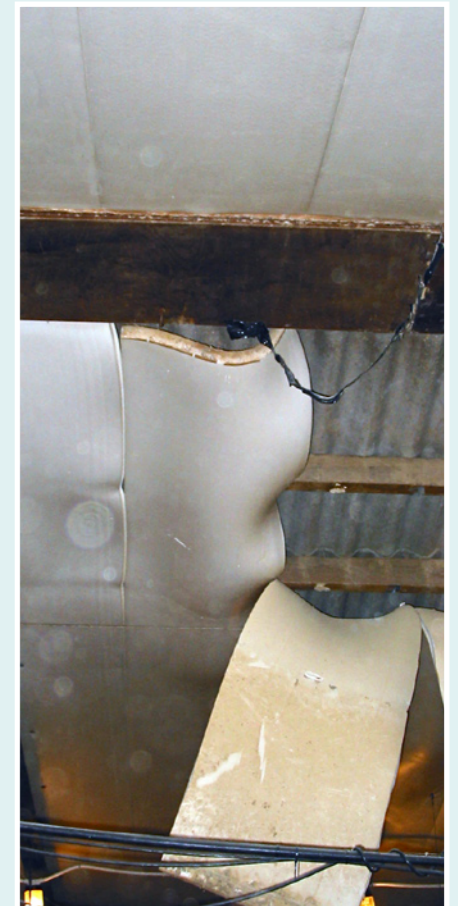
- IsoBoard (5 years installed): No Bacterial Growth
- Other Surfaces: <10 Colony forming units per unit area.

### Installation Benefits.

**Here are some of the advantages using IsoBoard:**

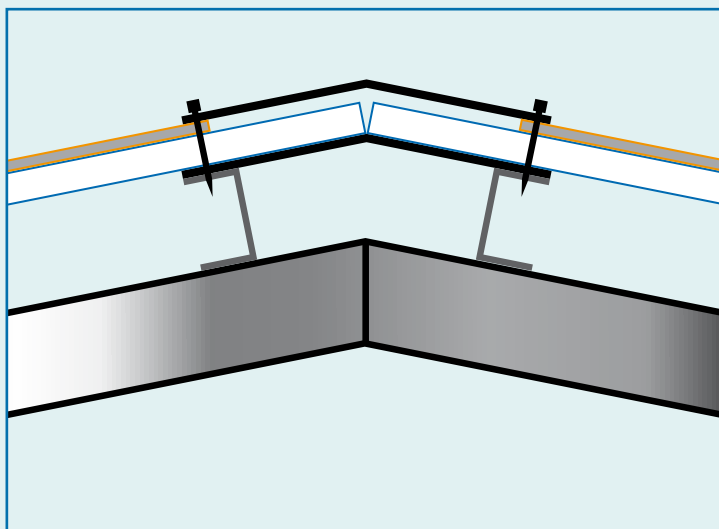
- Roof sheets are fixed to purlins through the IsoBoard panels for the simplest installation procedure.
- IsoBoard is available in various thicknesses appropriate to your climatic region and insulation objective.
- Tongue-and-groove joints and long lengths provide continuous insulation coverage, eliminating heat bridging through conductive supports.
- IsoBoard’s white colour and light reflective qualities reduce lighting requirements.
- No additional support is required for purlin spans of up to 1,5 meters using 30 mm IsoBoard.
- The panels are light, and ideal for more economical steel frame structures.
- IsoBoard is proven to not absorb moisture and maintains its design insulation value, even after ten years.

**Fire Retardant.** IsoBoard has no flame spread characteristics. See picture right as proof that a fire, caused by a gas heater, did not spread. The IsoBoard performed exactly as predicted, shrinking from the heat source with no flame spread or burning droplets. Damaged boards were easily replaced.



## Properties.

	Standard	Conditions	IsoBoard
Density	ISO 845; 1988	FDIS4898	32–36 kg m <sup>3</sup>
Compressive Strength	ISO 844; 1978	10% Strain	160–310 kpa
Water Vapour Permeability	ISO 1663; 1981	38°C / 88% RH	0.78 ng/Pa.s.m
Water Absorption	ISO 2896; 1987	50mm Depth / 96 Hours	0.26% by volume
Coefficient of Linear Thermal Expansion	ISO 4897; 1985	-10°C to 60°C	0.067 mm per m per °C
Dimensional Stability	EN1604	-10°C to 60°C	< 1.0%
Thermal Conductivity (average of two tests)	ISO 8302; 1991 (F)	20°C mean temperature. Dry and 90 day aged	0.024 W/m°C
Long term Thermal Conductivity	ISO 8302; 1991 (F)	Five year aged	0.028 W/m°C
Recommended Design Value	ISO 8302; 1991 (F)	90% RH	0.030 W/m°C
Combustibility and Flame Spread	Class: B/B1/2/H&V. Refer SANS 428 Classification Table		



## Handling and installation guidelines.

Store boards flat within original packaging until required. Protect from adverse weather and direct sunlight. Always butt join boards over purlins, if necessary allowing for a 5 mm gap between boards. Fit a ridge plate over the topmost purlins under the IsoBoard, to provide support and prevent deflection. Fit eave and gable closures as necessary to prevent possible entry of birds and vermin through the insulation. Consult your nearest IsoBoard Sales Office for advice concerning the appropriate insulation thickness for your application.

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