

Thermal Break Insulation for Residential & Commercial



Thermacon “Insulsteel 80.”

“Insulsteel 80” is a 3-in-1, extra heavy duty, reflective insulation engineered to function as a Thermal Break, Thermal and Vapour Barrier, suitable for use in wall and roof applications reducing Thermal Bridging and conductivity between building products. Insulsteel 80 exceeds the above requirements. Insulsteel 80 meets the requirements of the NCC in which a Thermal Break of R0.2 is required for steel framed/steel clad buildings and can also be used on timber framed construction forming a continuous barrier for superior thermal efficiency.

Manufactured by utilising the latest technology, Insulsteel 80 is a chemically cross-linked polyethylene foam structure, heat bonded both sides with a highly reflective foil with one side being a proprietary Antiglare coating making Insulsteel 80 a reflective Vapour Barrier and Thermal Break 3-in-1.

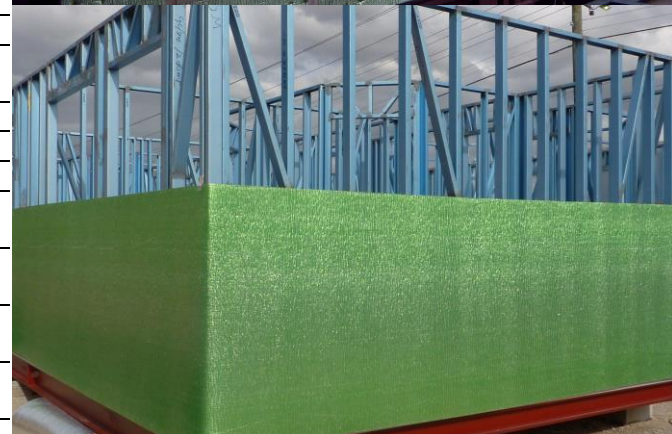
Product Information

Product Thickness	11mm
Roll Size	22.25m x 1.350mm (30m ²)
Roll Weight	15.3kg
Roll Diameter	570 mm
Reflectance Antiglare	92%
Reflective Side	97%

Insulsteel 80 – Thermal Break compliance for steel framed construction for use in Commercial and Residential applications

Product Testing

Test	Test Standard	Result
Thermal Resistance	ASTMC518	11mm R0.268
		10.3mm Compressed R0.251
Flammability Index	AS1530 Part 2	Low <5
Early Fire Hazard	AS1530 Part 3	0,0,0,3
Duty	AS/NZS4200.1-2017	Extra Heavy
Reflectivity (Reflective)	ASTM-E408	0.03
Emittance (Antiglare)	ASTM-E408	0.08
Vapour Control	ASTM E96-2016	Class 2
Water Control	AS.NZS 4200.1-2017	Water Barrier
Shrinkage	AS/NZS 4201.3-1994	0%
	Not greater than 0.5%	
Resistance to Wet Delamination	AS/NZS4201.2-1994	Pass
Resistance to Dry Delamination	AS/NZS4201.1-1994	Pass
Tensile Strength	AS1301.448s	Machine Direction 16.7kN/m Lateral Direction 13.6kN/m
Tearing Resistance	AS/NZS 4200.1 2017	Machine Direction 921kN/m Lateral Direction 598kN/m
Bursting Strength	AS2001.2.19-1988	1038 N
Corrosion Resistance	AS4859.1	Pass
Electrical Conductivity	AS/NZS200.1:2017	Electrically Conductive



All Thermacon Insulsteel products are manufactured under licence by Unipro manufacturing Co. Ltd

Meets the Requirements of NCC

NCC Compliant

Insulsteel 80 meets the requirements and is tested to AS/NZS 4200.1:2017, AS/NZS 4859.1:2018 and meets the requirements of NCC code for pliable membranes and insulation

Storage

Insulsteel 80 should be kept clean and dry and should be stored indoors.

Specification Notes

- Specifiers/Builders, Contractors request
- Product Name: Insulsteel 80
- Specify – Install Insulsteel 80, chemically crosslinked Polyethylene Foam, heat laminated both sides with a highly reflective Aluminum, with one side a proprietary Antiglare coating.
- Material R Value 11mm R0.268, compressed 10.3mm R0.251
- Duty: Extra Heavy Duty
- AS1530 Part 2 <5

Product Benefits

- Thermal Break R0.20
- Tested by NATA accredited laboratory to AS/NZS 4200.1:2017.
- Water Resistant
- Fire Resistant
- Non allergenic
- Fibre free
- Contributes to the Total R Value of the structure
- Extra Heavy Duty

Bushfire Attack Levels / BAL

Insulsteel 80 complies with the requirement of AS3959-2009 Construction of Buildings in bush fire prone areas for use
Roof Application BAL Low – BAL 40
Wall Application BAL Low – BAL FZ

Thermal Performance / Total System R Value

R Values are based upon typical conditions for Australian mainland and have calculated in accordance with AS/NZS 4859.1 2002/Amdt 1:2006

Typical Applications[^]

Construction Type	Heat Flow In	Heat Flow Out
Steel Stud Frames Wall Insulsteel 80	R1.78	R1.98
Brick Veneer Wall Insulsteel 80	R1.85	R2.11
Commercial Metal Roof Suspended Ceiling Insulsteel 80	R3.05	R1.44
Tilt Slab Concrete Office Wall Insulsteel 80	R1.9	R2.1
Residential Wall Double Brick Insulsteel 80	R1.95	R2.12
Weatherboard Wall with Battens Insulsteel 80	R1.68	R1.88
Warehouse Wall with Metal Cladding Insulsteel 80	R1.08	R1.22
Residential Metal Roof Ventilated Insulsteel 80	R2.59	R1.26
Residential Tiled Roof Ventilated Insulsteel 80	R2.21	R1.11
Commercial Warehouse Insulsteel 80	R1.85	R0.93
Suspended Framed Floor Over Bearers (Enclosed) Insulsteel 80	R1.92	R3.41

For other Thermal Performance figures please consult our Technical Data Sheet.

[^] The R-Values shown were prepared and certified by James M. Fricker MIEAust. CPEng. Consultant engineer in insulation to the BCA, the NCC 2011, and the insulation industry. These values are based upon product in an in service condition, and are in accordance with AS/NZS 4859.1:2002. Total R Values are based on product in-service conditions in accordance with AS/NZS4859.1:2002/Amdt 1 (Dec 2006) including the alteration of insulation material R for temperature and derations of reflective foil emittances due to dust as noted.
Where a cavity is sealed, it is assumed there is no dust and n=hence emittance is not derated.



*Manufactured to Australian specifications by Australians for Australians.