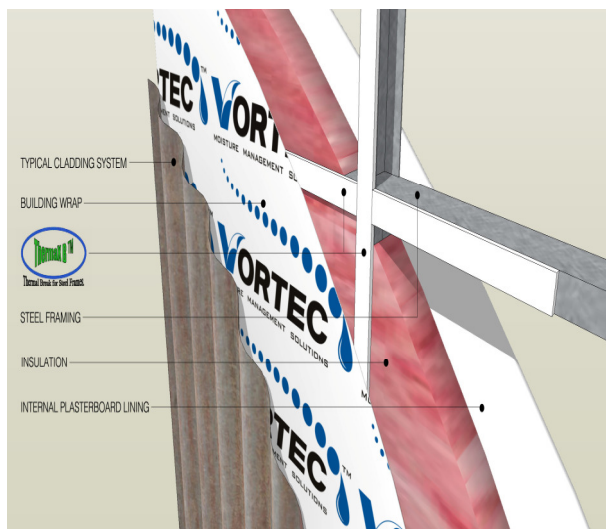


Data Sheet REF : TB000172

THERMAX B™ - THERMAL BREAK FOR STEEL FRAMED BUILDINGS

ThermaX B™ is made from High Density Extruded polystyrene (HD XPS) providing optimum thermal insulation against cold and heat, which makes it a product that is highly suitable for insulating buildings in all kinds of climatic regions. Buildings insulated with HD XPS are highly energy efficient, as they enable a substantial level of energy-saving while maintaining the maximum level of comfort indoors in any season of the year. The HD XPS panel is made of a specially formulated, closed cell, high density, extruded polystyrene. HD XPS is suited for places where a high mechanical resistance is required. Its resistance to water and compression, make it the ideal insulation solution for extreme conditions. Moreover, it is very easy to install and offers a high performance thermal insulation for your building.



What are thermal breaks ?

Maintaining the thermal resistance of a wall assembly in buildings is a requirement needed to meet Clause H1 of the NZBC. This requirement especially applies to any part of a steel framed building that provides living space as part of the building's use, Granny flat , office etc. ThermaX B™ is used to prevent 'Thermal Bridges' between the external cladding and the steel framing. A Thermal Bridge is a physical pathway along which heat can travel from inside the building to the outside.

In BRANZ Feb/Mar 'Build' magazine under "Thermal Breaks and Bridges", it is stated that Thermal Break material must have an R-value of at least R 0.30. Based on this expert opinion, ThermaX B™ 10 mm thick strips exceed this requirement.

Features and Benefits

ThermaX B™ is made from XEPS a High Density Extruded Polystyrene.

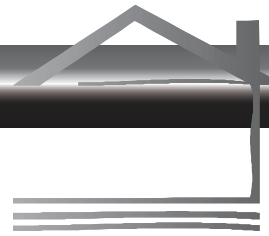
- Inert Product will not corrode , rot or support the growth of mould, mildew or soil micro-organisms.
- ThermaX B™ is 100% recyclable
- Contains NO CFC's
- Highly durable and flexible
- Simple to install
- High Density and compressive strength helps to eliminates pop marks when fixing through cladding

Thickness	Density	R Value	Test Items	Test Methods	Test Results
10 mm	45 kg / m3	0.37	Bulk Density (kg/m ³)		45.5
15 mm	55 kg / m3	0.57	Thermal Conductance W/m-k)		0.0291
20 mm	55 g / m3	0.74	R Value 10 mm		0.37
30 mm	55 kg / m3	1.10	Flexural Strength (kgf/cm ²)	CNS 2536 (1992)	8.86
			5% Compressive Strength (kgf/cm ²)		3.1
			Water Absorption (g/100cm ²)		0.256
			Moisture Osmosis (g/m ² -h-mmHg)		0.0099

Insulation Wholesalers Ltd

P.O Box 1826, Palmerston North, New Zealand. **M** : +64 021 927 038 **P** : +64 06 329 8065 **F** : +64 06 329 8064

www.insulationwholesalers.co.nz



Installation

The product is placed over studs, top and bottom plates, dwangs and any point where the framing penetrates the insulation either glue-fixed or screw-fixed direct to frame. Polysafe Spray Adhesive & Non Solvent wall board adhesive supplied by Insulation Wholesalers Ltd. The wall wrap is then laid over the thermal break, before the cladding is installed. ThermaX B™ can be installed by any competent tradesman with the appropriate tools.

Installation method

Option # 1 ThermaX B™ attached directly to the steel frame with building wrap installed over —this isolates the building wrap from steel frame.

Option # 2 Building Wrap installed directly to steel frame with ThermaX B™ installed over building wrap —it is recommended that the thermal break be a min. of 30mm oversized than steel frame. This is to form an isolation strip between steel frame and wrap in the event moisture gets past outside exterior cladding. This precaution is in consideration with absorbent style building wraps holding moisture against the frame for long periods creating possible corrosive issues.

CUTTING using a fine tooth handsaw or for clean straight cuts best results are achieved with thin blade cutting knives. I.e. Products similar to Stanley blades.

N.B Care must be taken not to over-tighten any screw fixing as it can compress the thermal break material.

What width is the correct width for thermal break??

To eliminate heat loss and heat gain through the steel frame to the exterior cladding, there has been a lot of energy studying what width Thermal Break is required .

Working on the **Minimum, Optimum** and **Maximum** scenario for choosing the right width ThermaX B™ .

(If steel frame was 40 mm in width)

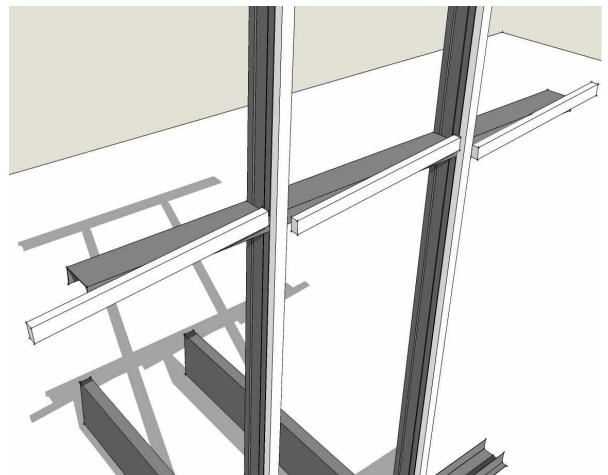
Minimum = 5mm oversize of framing (45mm) only deals with conducting heat

Optimum = 30mm oversize of framing (70 mm) deals with both conducting and radiating heat transfer.

Maximum = full sheets – adds to the overall insulation value of the wall assembly.

ThermaX B is available :-

- In various thicknesses; 10mm, 15mm, 20mm & 30mm.
- Custom widths starting at nom width 40mm in 10mm increments.
- Other thicknesses/widths available on request.



NASH N-11 document - House Insulation Guide solutions for thermal breaks to comply with NZBC E3-Internal Moisture and details to comply with NZBC H1-Energy Efficiency.

For sales and service feel free to contact Matthew Noud your national Rep.

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