

# Thermacon CI MAX Soffit Board (PIR)

In keeping with Thermacon Insulations' dedication to supplying only the best Formaldehyde Free products, our CI Max Soffit Boards and All Purpose Boards (PIR) do not contain any measurable levels of Formaldehyde.

The following is an extract from a report written by four Research Scientists of Dow Chemical Company, Midland MI, USA into the comparisons between Phenolic Foam and Polyisocyanurate Foam (PIR).

**Formaldehyde:**

Liquid chromatography (LC) was used to determine the amount of unreacted formaldehyde monomer remaining in the Phenolic foam samples. The total residual formaldehyde found in both phenolic foam samples ranged from 137 – 264 PPM.

As a comparison, the raw materials used to produce PIR foam do not measure a reportable level of Formaldehyde."

## Thermacon CI Max Soffit Board.

Thermacon CI Max™ foam sheathing board is composed of a uniform closed-cell polyisocyanurate foam core bonded on each side to a printed foil and glass mat facer. CI Max foam sheathing is produced with a non-HCFC blowing agent, meeting the latest environmental regulations for using chemicals that do not harm the protective ozone layer in the earth's atmosphere. CI Max foam sheathing passed NFPA 286 Corner Burn Test for walls only or ceiling only without joint treatment, meeting all necessary building codes both in Australia, Europe, and in the USA.



### Product Information

Product Thickness mm	25, 27, 31, 42, 55, 66, 77, 88, 99	
Board Size – Length mm	2286	
Board Size – Width mm	1219	
Reflectance (Foil Side)	96%	
'R' Value	25mm	R1.14
	27mm	R1.2
	31mm	R1.4
	42mm	R1.9
	55mm	R2.5
	66mm	R3.0
	77mm	R3.5
	88mm	R4.0
99mm	R4.5	

### Product Testing

Test	Test Standard	Result	
Compressive Strength	ASTM C1289-12	>110	Pass
Thermal Conductivity	ASTM C518-10	0.022	
Cone Calorimeter	AS/NZS 3837	Group 1	
Ignitability Flame Spread	AS/NZS 1530.3	0/0/0/1	
Heat Release			
Smoke Release			
Emmittence	ASTM C1371	Reflective	E0.04
Water Absorbtion	ASTM C1289-12	0.1	Pass
Water Vapour Permeance 25mm	ASTM C1289-12	3	Pass
Corner Burn Test	NFPA 286		Pass
Service Temperature	Above Test	-73°C to 122°C	

- **AS/NZS 4859.1 Compliant.**
- **BCA Fire Classification Group 1.**
- **No measurable Formaldehyde.**
- **Low Thermal Conductivity of only 0.022.**
- **CFC/HCFC free with Zero Ozone Depletion Potential (ODP).**
- **Does not cause corrosion.**

#### SPECIFICATION GUIDE

“The Soffit Insulation shall be Thermacon CI Max Polyisocyanurate (PIR) Foam Soffit Board \_\_mm Thick comprising of a CFC/HCFC free ridged uniform closed cell PIR Foam core, bonded on each side to a foil and glass mat facer, manufactured by Johns Manville in the USA. This board is to be installed in accordance with the instructions issued by Thermacon Insulation Pty Ltd.”

## Thermacon CI Max Soffit Board.

### Thermal Performance <sup>^</sup>

Total R-Values for various thicknesses of Thermacon CI Max Soffit Board with various fixing methods.

#### Roof Application – no ceiling (150mm concrete)

Product Thickness (mm)	Heat Flow In	Heat Flow Out
27	R <sub>T</sub> 2.11	R <sub>T</sub> 1.68
31	R <sub>T</sub> 2.29	R <sub>T</sub> 1.87
42	R <sub>T</sub> 2.76	R <sub>T</sub> 2.40
55	R <sub>T</sub> 3.33	R <sub>T</sub> 3.03
66	R <sub>T</sub> 3.81	R <sub>T</sub> 3.56
77	R <sub>T</sub> 4.29	R <sub>T</sub> 4.08
88	R <sub>T</sub> 4.77	R <sub>T</sub> 4.61
99	R <sub>T</sub> 5.25	R <sub>T</sub> 5.14

#### Roof Application – suspended ceiling (150mm concrete)

Product Thickness (mm)	Heat Flow In	Heat Flow Out
27	R <sub>T</sub> 3.32	R <sub>T</sub> 2.18
31	R <sub>T</sub> 3.50	R <sub>T</sub> 2.38
42	R <sub>T</sub> 4.01	R <sub>T</sub> 2.91
55	R <sub>T</sub> 4.60	R <sub>T</sub> 3.55
66	R <sub>T</sub> 5.09	R <sub>T</sub> 4.08
77	R <sub>T</sub> 5.59	R <sub>T</sub> 4.61
88	R <sub>T</sub> 6.08	R <sub>T</sub> 5.14
99	R <sub>T</sub> 6.57	R <sub>T</sub> 5.67

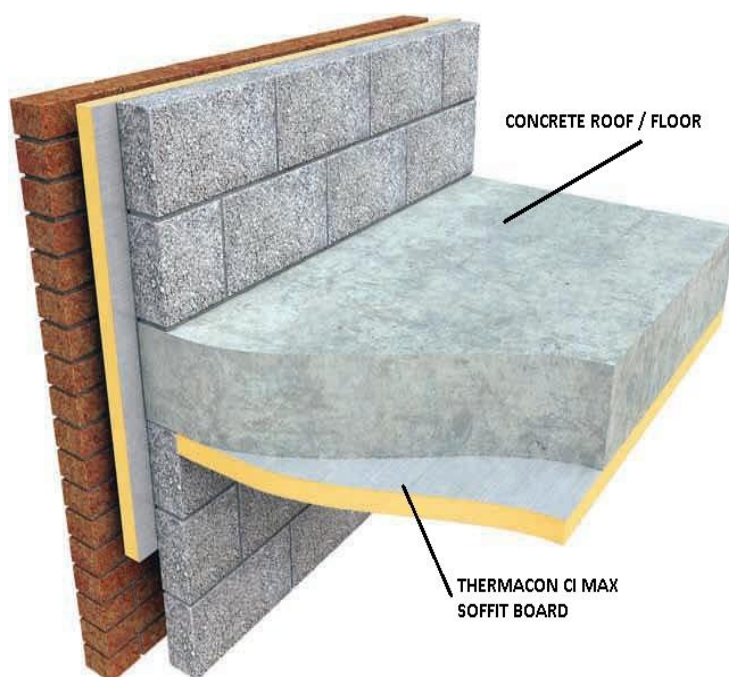
#### Unenclosed sub-floor application (150mm concrete)

Product Thickness (mm)	Heat Flow In	Heat Flow Out
27	R <sub>T</sub> 1.49	R <sub>T</sub> 1.64
31	R <sub>T</sub> 1.66	R <sub>T</sub> 1.83
42	R <sub>T</sub> 2.15	R <sub>T</sub> 2.36
55	R <sub>T</sub> 2.72	R <sub>T</sub> 2.98
66	R <sub>T</sub> 3.20	R <sub>T</sub> 3.51
77	R <sub>T</sub> 3.68	R <sub>T</sub> 4.04
88	R <sub>T</sub> 4.16	R <sub>T</sub> 4.57
99	R <sub>T</sub> 4.64	R <sub>T</sub> 5.10

#### Enclosed sub-floor application (150mm concrete)

Product Thickness (mm)	Heat Flow In	Heat Flow Out
27	R <sub>T</sub> 2.20	R <sub>T</sub> 2.94
31	R <sub>T</sub> 2.37	R <sub>T</sub> 3.13
42	R <sub>T</sub> 2.86	R <sub>T</sub> 3.66
55	R <sub>T</sub> 3.43	R <sub>T</sub> 4.28
66	R <sub>T</sub> 3.91	R <sub>T</sub> 4.81
77	R <sub>T</sub> 4.39	R <sub>T</sub> 5.34
88	R <sub>T</sub> 4.87	R <sub>T</sub> 5.87
99	R <sub>T</sub> 5.35	R <sub>T</sub> 6.40

<sup>^</sup> 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 hence emittance is not derated.



## Thermacon CI Max Soffit Board.

### INSTALLATION GUIDE

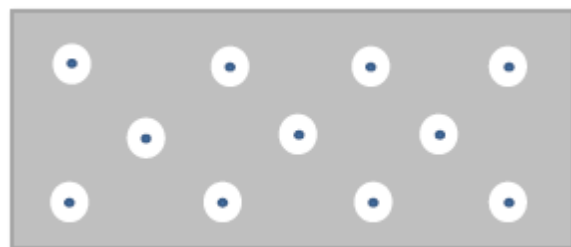
Thermacon CI MAX Soffit Board should be fitted to concrete roof or floor using a minimum of 11 insulation fasteners with a minimum head diameter of 40mm.

1. Thermacon CI MAX Soffit Board can be fixed overhead in either a staggered pattern or a square pattern. All joints are required to be taped with a minimum 48mm Reinforced tape.

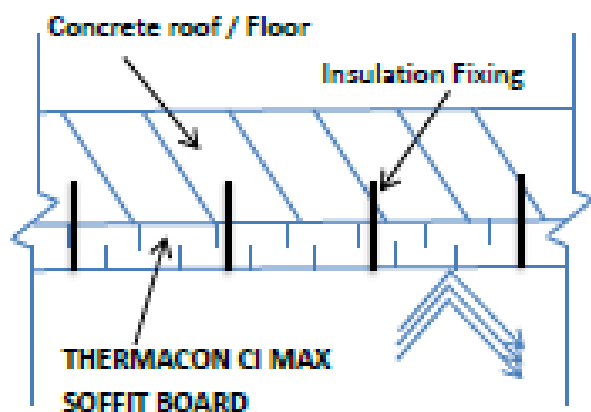
2. Fixings are required to be evenly distributed over the board. Use 4 fasteners along each long side no less than 50mm, no more than 150mm from the edge. Use 3 fixings through the centre offset from the edge positions. The fixings are required to penetrate the substrate by at least 40mm.

3. Where the board is being installed in areas subject to external wind pressure, there may be a requirement for additional fixings. This should be assessed in accordance with the appropriate Australian Wind Load standards.

4. Where the substrate is severely uneven or damaged, either an alternative product with the identical or superior 'R Value' and performance, which would allow fixing in the same manner as the PIR Board, or, the fixing of furring channels which would support the Thermacon CI Max Soffit Board evenly is recommended. Please contact your Thermacon consultant who will only be happy to offer you a cost effective, successful solution to your problem.



FIXING PATTERN



INSTALLATION DETAIL

