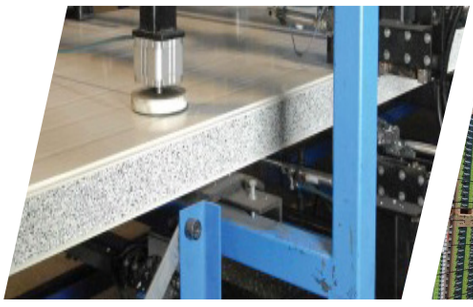
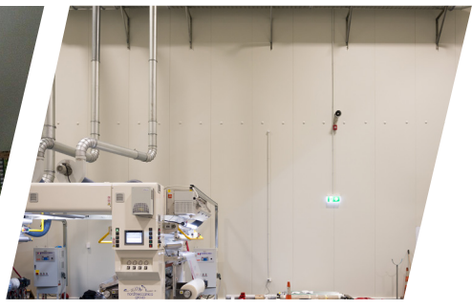
Bondor NZ™ Performance Panels | Specification

INSULATED PANEL INFORMATION SHEET





FEATURES
FIRE RATED / INSULATED / TOTAL SYSTEM WARRANTY

UTILISATION
WALLS / CEILINGS / ROOF

APPLICATION
COMMERCIAL / INDUSTRIAL / ARCHITECTURAL / RESIDENTIAL

FM APPROVED

XFLAM

Telarc. Registered Quality ISO 9001

Telephone: 0800 430 430
Email: info@bondor.co.nz
www.bondor.co.nz

TABLE 1: FIRE PERFORMANCE

• Specific construction detailing required

- The structural rating applied to load bearing construction where a suitable fire rated structure is provided by others.

FIRE PERFORMANCE	XFLAM	EPS
Insurer Approved Factory Mutual (FM Approved)	YES FM 4471 - Roofing FM 4880 - Interiors FM 4881 - Exteriors FM 4882 - Smoke sensitive occupancies	YES But Not FM Approved
AS 1530.4 Fire rating of elements (BS 476 PT22-24) (LPS 1208 & equivalent)	- / 120 / 30 (100 mm Wall) - / 120 / 115 (250 mm Wall) - / 90 / 60 (100 mm Wall + 13 mm Fireline Gib) - / 60 / 30 (100 mm Ceiling)	- / 240 / 0 (100 mm Panel)
ISO 9705 Time to flashover NZBC C/AS1-AS7 C/VM2	Group 1-S Group 2-S	Group 1-S Group 2-S
AS 1530.3 Spread of Fire Fire Performance Methods for fire tests on building materials	Ignitability 0 Spread of flame 0 Heat evoked 0 Smoke developed 1	Ignitability 0 Spread of flame 0 Heat evoked 0 Smoke developed 2
SMOGRA (m^2/s^2 x 1000)	2.2	3.8
Toxicity	Very low CO, CO^2	Low CO, CO^2, C
Peak heat release rate K.w/m^2 Refer ISO 5660	81	97
Total heat released MJ/m^2 Refer ISO 5660	4.9	19

TABLE 2: FIRE PERFORMANCE ISO 5660

• ISO 5660-1:2002 Reaction to Fire Tests
• Steel facings only

PRODUCT	GROUP NUMBER	AVERAGE SPECIFIC EXTINCTION AREA
GALVSTEEL®	Group 1-S	2.6m²/Kg
COLORSTEEL® Endura®	Group 1-S	132.2m²/Kg
COLORSTEEL® Maxx®	Group 1-S	107.08m²/Kg

TABLE 3: THERMAL RESISTANCE

• R Values are conservative and based on core values alone

	XFLAM	EPS
50 mm	1.61	1.31
75 mm	2.42	1.96
100 mm	3.22	2.62
150 mm	4.84	3.62
200 mm	6.45	5.23
250 mm	8.06	6.54

TABLE 4: NOMINAL WEIGHTS

• Weights are based on panels of 0.6 BMT steel wall and facade profiles kg/m^2

	XFLAM	EPS
50 mm	12.7	11.6
75 mm	13.7	12.0
100 mm	14.6	12.3
150 mm	16.5	13.1
200 mm	18.4	13.9
250 mm	20.3	14.7

TABLE 5: THICKNESS FOR CHILLER AND FREEZERS

• Consider an extra 50mm thickness for roof and walls exposed to direct sunlight
• Consideration should be given to insulating floor detail
• Values are only guides and are given for coolrooms operating under average ambient conditions

OPERATING TEMPERATURE °C	XFLAM	EPS
7.0 down to 3.0	75 mm	75 mm
3.0 down to -3.0	100 mm	100 mm
-3.0 down to -18.0	125 mm	150 mm
-18.0 down to -23	150 mm	175 mm
-23.0 down to -30	175 mm	200 mm

TABLE 6: PHYSICAL PROPERTIES

• Core material only unless other wise stated

	XFLAM	EPS
Density	32 Kg/m³	16 Kg/m³
Workability	Excellent. No requirement for protection. Resistant to pedestrian traffic (1 person/m²)	Excellent. No requirement for protection. Resistant to pedestrian traffic (1 person/m²)
Crushing/ Compressive strength to 10% deformation	130KPa	65KPa
Cross breaking strength	230KPa	180KPa
Thermal Conductivity	0.032 w/mK	0.042 w/mK
Recyclable	Yes	Yes
Acoustics of panel	25 STC	22 STC
Water vapour transmission rate AS 2498.5 1993	180 µg/m².s	217 µg/m².s

TABLE 7: DIMENSIONS AND TOLERANCES

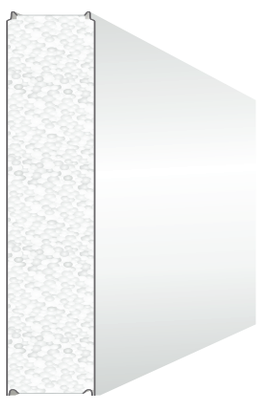
• Under the Building Code insulated panel used as cladding is an alternative solution and requires specific design. In a roofing application BondorNZ panel satisfies the requirements of the NZBC external moisture clause E2, when correctly specified and installed with flashings which direct the flow away from the building envelope
• Roof pitches will vary depending on site conditions, loads, purpose, configuration, snow loading and span requirements.

BUILDING COMPONENT	EFFECTIVE COVER +- 1 mm	MIN ROOF PITCH
Walls, Ceilings Flat, Ribbed, Satinline	1200 mm	NA
Imported Roofing Metric Min. Thickness 150 mm for residential	1000 mm	3°
Temperature Controlled Roofing Freezer roof/flat Fully supported	1200 mm	3°

PANEL PROFILES

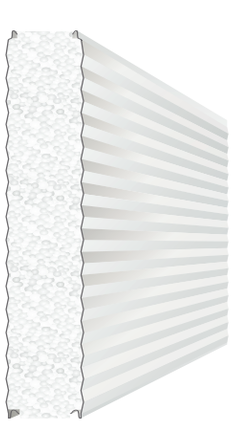
• Finished panels come at 1200 mm wide with a minimum length of 1200 mm, maximum length of 25000mm, subject to transport capabilities.

Flat panel



Ribbed Panel

Satinline Panel



Span Data

- Spans are indicative only and apply to wall and roof profiles using nominal 0.6 BMT steel, specific site conditions need to be calculated by an engineer
- For canopies and snow load use AS1170.3
- For wind and speed direction refer to code AS1170.2 region A6, A7 and w, by default use 1.00 KPa. Note wind pressure depends on the life of the building
- 0.50 KPa loading takes account of fire loading
- Specific engineering is required for excessive cantilevered application.

TABLE 9: PANEL SPAN (M) EPS

- Allowable UDL accounting for ULS SLS Span/200 single or multiple span condition

PANEL THICKNESS	2.0	2.4	3.0	3.6	4.0	5.0	6.0	7.0	8.0	9.0	10.0
50 mm	1.65	1.33	1.00	0.77	0.66	0.46	0.32	0.24	0.18	0.14	0.11
75 mm	2.52	2.05	1.57	1.24	1.08	0.72	0.50	0.37	0.28	0.22	0.18
100 mm	3.39	2.78	2.15	1.72	1.49	0.95	0.66	0.49	0.37	0.29	0.24
125 mm	4.27	3.50	2.73	2.20	1.86	1.19	0.83	0.61	0.47	0.37	0.30
150 mm	5.14	4.23	3.31	2.68	2.23	1.43	0.99	0.73	0.56	0.44	0.36
175 mm	6.02	4.96	3.89	3.16	2.61	1.67	1.16	0.85	0.65	0.51	0.42
200 mm	6.89	5.69	4.47	3.58	2.90	1.85	1.29	0.95	0.72	0.57	0.46
250 mm	8.65	7.15	5.64	4.47	3.62	2.32	1.61	1.18	0.91	0.72	0.58
300 mm	10.40	8.61	6.80	5.36	4.34	2.78	1.93	1.42	1.09	0.86	0.70

>0.87 KPa Minimum Exterior

>0.5 Minimum Internal

<0.5 KPa Special Design

Span data is generated in accordance with AS/NZS 1170: 2011
Based on 5% LPL 80% Confidence

TABLE 10: PANEL SPAN (M) XFLAM

- Allowable UDL accounting for ULS SLS Span/200 single or multiple span condition

PANEL THICKNESS	2.0	2.4	3.0	3.6	4.0	5.0	6.0	7.0	8.0	9.0	10.0
50 mm	2.20	1.77	1.33	1.03	0.88	0.59	0.41	0.30	0.23	0.18	0.15
75 mm	3.36	2.73	2.09	1.66	1.42	0.91	0.63	0.46	0.35	0.28	0.23
100 mm	4.52	3.70	2.86	2.29	1.89	1.21	0.84	0.62	0.47	0.37	0.30
125 mm	5.69	4.67	3.64	2.92	2.36	1.51	1.05	0.77	0.59	0.47	0.38
150 mm	6.86	5.64	4.41	3.50	2.83	1.81	1.26	0.93	0.71	0.56	0.45
175 mm	8.02	6.61	5.19	4.08	3.31	2.12	1.47	1.08	0.83	0.65	0.53
200 mm	9.19	7.59	5.96	4.66	3.78	2.42	1.68	1.23	0.94	0.75	0.60
250 mm	11.53	9.53	7.52	5.83	4.72	3.02	2.10	1.54	1.18	0.93	0.76

>0.87 KPa Minimum Exterior

>0.5 Minimum Internal

<0.5 KPa Special Design

Span data is generated in accordance with AS/NZS 1170: 2011
Based on 5% LPL 80% Confidence