



## CORE COMPARISONS

FIRE PERFORMANCE	XFLAM	EPS	PIR	MINERAL WOOL
AS 1530.3: Steel Ext. / Int. face determination of flame propagation & smoke development	Ignitability 0 Spread of Flame 0 Heat Evolved 0 Smoke Developed 1	Ignitability 0 Spread of Flame 0 Heat Evolved 0 Smoke Developed 2	Ignitability 0 Spread of Flame 0 Heat Evolved 0 Smoke Developed 2	Ignitability 0 Spread of Flame 0 Heat Evolved 0 Smoke Developed 2
AS 1530.4/BS 476 pt22-24 / LPS 1208 and equivalents. Fire rating of elements	- / 120 / 30 (100mm Wall) - / 120 / 90 (250mm Wall) - / 90 / 60 (100mm Wall+ 13mm Fyrelite Gyp) - / 60 / 30 (100mm Ceiling)	- / 240 / 0 (100mm Panel)	- / 30 / 30 (100mm Panel) - / 30 / 30 (150mm Panel) - / 60 / 60 (200mm Panel)	- / 60 / 60 (100mm Panel) - / 120 / 120 (150mm Panel)
Factory Mutual (FM Approved)	FM 4471 - Roofing FM 4880 - Interiors FM 4881 - Exterior	-	FM 4880 FM 4471 FM 4881	FM 4880
ISO 9705 BCA Classification	Group 1	Group 1	Group 2	Group 1
SMOGRA (m <sup>2</sup> / s <sup>2</sup> x 1000)	2.2	3.8	21.4	Not known

ENERGY PERFORMANCE	XFLAM (R-Value)	EPS (R-Value)	PIR (R-Value)	MINERAL WOOL (R-Value)
50mm Panel	1.7	1.5	2.0	1.55
75mm Panel	2.5	2.1	3.0	2.24
100mm Panel	3.3	2.8	4.1	2.92
150mm Panel	4.8	4.0	6.1	4.28
200mm Panel	6.4	5.4	8.1	N/A
250mm Panel	8.0	6.7	N/A	N/A

R Values; NCC Specification J

ACOUSTIC VALUES	XFLAM	EPS	PIR	MINERAL WOOL
R <sub>w</sub>	R = 25	R = 25	R = 24	R = 28
R <sub>w</sub> + Ctr	23	20	20	25

ASKIN® Panel achieves the following ratings for 75mm panel in accordance with ISO 717 / AS 1191

MANUFACTURING TOLERANCES	XFLAM	EPS	PIR	MINERAL WOOL
Length	+5mm (T=5mm)	+5mm (T=5mm)	+/-5mm (T=10mm)	+5mm (T=5mm)
Width	+/-1mm (T=2mm)	+/-1mm (T=2mm)	+/-2mm (T=4mm)	+/-1mm (T=2mm)
Thickness <100mm	+/-1mm (T=2mm)	+/-1mm (T=2mm)	+/-2mm (T=4mm)	+/-1mm (T=2mm)
Thickness >100mm	+/-1mm (T=2mm)	+/-1mm (T=2mm)	+/-4mm (T=8mm)	+/-1mm (T=2mm)
Flatness	+/-2mm (T=4mm)	+/-2mm (T=4mm)	+/-3mm (T=6mm)	+/-2mm (T=4mm)

Note: T=Total Variance



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PHYSICAL PROPERTIES					
	CRITERIA	XFLAM	EPS	PIR	MINERAL WOOL
Core	Core Density	32 kg/m <sup>3</sup>	13.5 kg/m <sup>3</sup>	37.5-42.5 kg/m <sup>3</sup>	100 / 120 kg/m <sup>3</sup>
	100mm Panel Weight with 0.5mm skins	11.55 kg/m <sup>2</sup>	9.45 kg/m <sup>2</sup>	12.25 kg/m <sup>2</sup>	18.25 / 20.25 kg/m <sup>2</sup>
	200mm Panel Weight with 0.5mm skins	14.85 kg/m <sup>2</sup>	10.65 kg/m <sup>2</sup>	16.25 kg/m <sup>2</sup>	28.25 / 32.25 kg/m <sup>2</sup>
	Water Vapour Transmission Rate AS 2498.5 1993	180 µg/m <sup>2</sup> .s	217 µg/m <sup>2</sup> .s	215 µg/m <sup>2</sup> .s	N/A
	Recyclable Core	Yes (100%)	Yes (100%)	-	No
Steel clad interval wall, ceiling and roof panels	Workability	Excellent. No requirement for protection	Excellent. No requirement for protection	Protective clothing and dust masks essential	Protective clothing and dust masks recommended
	Trafficability	Resistant to traffic maintenance. (1 person / panel)	Resistant to traffic maintenance. (1 person / panel)	Subject to design	No pedestrian traffic - crawl boards required

## ENGINEERED PANEL SPANS

Minimum allowable UDL for ULS wall span condition (kPa)																
	XFLAM				EPS-SL				PIR 0.5/0.5mm				MINERAL WOOL			
0.6/0.6 skins	0.5 kPa	0.87 kPa	1.0 kPa	1.2 kPa	0.5 kPa	0.87 kPa	1.0 kPa	1.2 kPa	0.5 kPa	0.87 kPa	1.0 kPa	1.2 kPa	0.5 kPa	0.87 kPa	1.0 kPa	1.2 kPa
50mm	5.7	4.4	4.1	3.3	4.6	3.5	3.3	3.0	4.8	3.9	3.4	3.0	3.3	2.5	2.3	2.0
75mm	7.0	5.5	5.0	4.2	5.8	4.4	4.1	3.7	5.9	4.5	4.0	3.6	4.0	3.1	2.9	2.4
100mm	8.1	6.1	5.7	5.0	6.9	5.0	4.7	4.3	7.4	5.8	5.4	4.5	4.6	3.6	3.4	2.7
150mm	9.9	7.6	6.9	5.8	8.3	6.1	5.7	5.4	9.9	7.5	7.1	5.6	5.2	4.0	3.8	3.4
200mm	11.5	8.9	8.1	6.7	9.5	7.1	6.6	6.1	11.0	8.5	7.4	7.0	N/A	N/A	N/A	N/A
250mm	12.0	9.5	8.7	7.6	10.5	8.0	7.5	6.7	NA	NA	NA	NA	N/A	N/A	N/A	N/A
300mm	12.0	10.0	9.1	8.6	11.5	8.7	8.1	7.4	NA	NA	NA	NA	N/A	N/A	N/A	N/A

0.5 kPa, 0.87 kPa, 1.0 kPa and 1.2 kPa are arbitrary loads which apply to common building applications. The table is designed to give the reader a brief understanding of the panels spanning capabilities.

CYCLONE PERFORMANCE	XFLAM FLAT				XFLAM METRIC			
Pressures / Fixing centres	6 kPa 1200	8 kPa 600	12 kPa 400	Impact m/s	6 kPa 200	8 kPa 250	12 kPa 250	Impact m/s
75mm (Theoretical)	1.6	1.4	0.8		1.8	1.5	0.9	
100mm (Certified)	1.8	1.5	1.2	39	2.4	2.0	1.2	40

\* 100mm EPS panel has been impact tested successfully to 38 m/s  
NCC B1-10 Roof L-H-L Test, Walls AS4040-3: 1992  
0.6/0.6mm XFLAM Panel Span at Load Table calculated from Test Results performed by the University of Adelaide.

ASTM D1976-1995 (T Peel Test) Average N/mm	XFLAM	EPS	PIR	MINERAL WOOL
Initial Peel	1.27	2.4	0.74	
Propagation	0.31	0.59	0.16	