

## Core Material Comparisons

CORE MATERIAL	Expanded Polystyrene with Fire Retardant		Thermosetting Phenolic Composite		Mineral Wool	
	EPS-FR		TPC		MW	
<b>ACOUSTIC CHARACTERISTICS</b>						
Frequency: 50mm - 150mm Panel -STC	25dB		25dB		25dB	
<b>CORE CHARACTERISTICS</b>						
Core Density	13.5kg/m <sup>3</sup>		36kg/m <sup>3</sup>		100kg/m <sup>3</sup>	
<b>THERMAL CONDUCTIVITY</b>						
W/mK @ 23C	0.042		0.039		0.0365	
<b>ENERGY PERFORMANCE</b>						
	External Roof		External Roof		External Wall	
	Winter (15°C)	Summer (23°C)	Winter (15°C)	Summer (23°C)	Winter (15°C)	Summer (23°C)
R Value: 50mm Panel	1.38	1.36	1.45	1.45	-	-
R Value: 75mm Panel	1.90	1.85	2.10	2.05	2.25	2.15
R Value: 100mm Panel	2.52	2.43	2.75	2.65	2.95	2.85
R Value: 150mm Panel	3.69	3.56	4.05	3.90	4.40	4.20
R Value: 200mm Panel	4.88	4.68	5.40	5.20	-	-
<b>FIRE PERFORMANCE INFORMATION</b>						
C1.1 Non Combustible C1.9e	Combustible		Combustible		Non-Combustible	
Early fire hazard properties (A.S. 1530.3 1999)	Ignitability - 0		Ignitability - 0		Ignitability - 0	
	Spread of Flame - 0		Spread of Flame - 0		Spread of Flame - 0	
	Heat Evolved - 0		Heat Evolved - 0		Heat Evolved - 0	
	Smoke Developed - 2		Smoke Developed - 1		Smoke Developed - 2	
AS/ISO 9705 classification	Group 1		Group 1		Group 1	
Factory Mutual (FM Approved)	-		FM 4880, 4881, 4882, 4471		-	
SMORGA (m2/S2 x 1000)	3.8		2.2		N/A	
Non Load Bearing Wall (AS 1530.4:2014)	N/A		N/A		-/60/120	
Bushfire Attack Level (BAL)	-		BAL-29		-	
<b>PHYSICAL INFORMATION</b>						
Panel Weights: 0.6mm skins at 100mm core	11.30kgs/m <sup>2</sup>		14.2kgs/m <sup>2</sup>		20.25kgs/m <sup>2</sup>	
Recyclability	Yes		Yes		Limited	
Safety handling requirements	Safety Data Sheet		Safety Data Sheet		Safety Data Sheet	

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