



# ENGINEERING PROPERTIES SHEET

#	Property	Test	Units	3mm FR Core	4mm FR Core	6mm FR Core	3mm LDPE Core	4mm LDPE Core	6mm LDPE Core
1	Thickness		mm in	3.0 0.118	4.0 0.157	6.0 0.236	3.0 0.118	4.0 0.157	6.0 0.236
2	Weight (calculated)		kg/m <sup>2</sup> lb/ft <sup>2</sup>	5.55 1.14	7.05 1.45	10.05 2.06	4.55 0.93	5.47 1.12	7.32 1.50
3	Temperature Range		°C °F	-48 to +80 -55 to +175	-48 to +80 -55 to +175	-48 to +80 -55 to +175	-48 to +80 -55 to +175	-48 to +80 -55 to +175	-48 to +80 -55 to +175
4	Bond Strength	ASTM D1781	Nm/m in-lb/in	≥100 ≥22.5	≥100 ≥22.5	≥100 ≥22.5	≥100 ≥22.5	≥100 ≥22.5	≥100 ≥22.5
5	Coefficient of Expansion	Based on aluminum skins	mm/mm/°C in/in/°F	2.36 x 10 <sup>-5</sup> 1.31 x 10 <sup>-5</sup>	2.36 x 10 <sup>-5</sup> 1.31 x 10 <sup>-5</sup>	2.36 x 10 <sup>-5</sup> 1.31 x 10 <sup>-5</sup>	2.36 x 10 <sup>-5</sup> 1.31 x 10 <sup>-5</sup>	2.36 x 10 <sup>-5</sup> 1.31 x 10 <sup>-5</sup>	2.36 x 10 <sup>-5</sup> 1.31 x 10 <sup>-5</sup>
6	Core Density	ASTM D792	kg/m <sup>3</sup> lb/in <sup>3</sup>	1500 5.42 x 10 <sup>-2</sup>	1500 5.42 x 10 <sup>-2</sup>	1500 5.42 x 10 <sup>-2</sup>	920 3.32 x 10 <sup>-2</sup>	920 3.32 x 10 <sup>-2</sup>	920 3.32 x 10 <sup>-2</sup>
7	Flame Spread Index	ASTM E84		Pass = Class A	Pass = Class A	Pass = Class A	Pass = Class A	Pass = Class A	Pass = Class A
8	Smoke Developed Index	ASTM E84		Pass = Class A	Pass = Class A	Pass = Class A	Pass = Class A	Pass = Class A	Pass = Class A
9	Intermediate Scale Multi-Story Test	NFPA 285		Passed	Passed	-	N/A	N/A	N/A
10	Interior Room Corner Burn	UL 1715		Passed	Passed	-	N/A	N/A	N/A
11	Fire Test of Building Construction and Materials	ASTM E119		Passed	1 hr Passed	-	N/A	N/A	N/A
12	Flatwise Tensile Strength	ASTM C297	MPa psi	-	-	-	-	-	6.17 894
13	Ignition Temperature of Plastics	ASTM D1929	Flash Ignition		464°C (867°F) 476°C (889°F)			361°C (682°F) 410°C (770°F)	
14	Flexural Modulus	ASTM D7249	MPa psi	-	68,115 9.879 x 10 <sup>6</sup>	-	-	69,685 10.107 x 10 <sup>6</sup>	62,663 9.089 x 10 <sup>6</sup>
15	Metal Skin Specifications	ASTM B209		3000 Series	3000 Series	3000 Series	3000 Series	3000 Series	3000 Series
16	Metal Skin Ultimate Tensile Strength	ASTM E8	MPa ksi	≥159 ≥23	≥159 ≥23	≥159 ≥23	≥159 ≥23	≥159 ≥23	≥159 ≥23
17	Metal Skin Yield Strength	ASTM E8	MPa ksi	≥131 ≥19	≥131 ≥19	≥131 ≥19	≥131 ≥19	≥131 ≥19	≥131 ≥19
18	Metal Skin Thickness		mm in	0.5 ± 0.05 Nominal 0.020	0.5 ± 0.05 Nominal 0.020	0.5 ± 0.05 Nominal 0.020	0.5 ± 0.05 Nominal 0.020	0.5 ± 0.05 Nominal 0.020	0.5 ± 0.05 Nominal 0.020
19	Metal Skin Finishes			70% PVDF, FEVE or Polyester	70% PVDF, FEVE or Polyester	70% PVDF, FEVE or Polyester	70% PVDF, FEVE or Polyester	70% PVDF, FEVE or Polyester	70% PVDF, FEVE or Polyester
20	Core Material			Polymer w/fire retardant filler	Polymer w/fire retardant filler	Polymer w/fire retardant filler	Polyethylene	Polyethylene	Polyethylene

**Notes:**

- 1 All Testing and Certifications performed by third party accredited testing agencies.
- 2 Test information contained in the above chart is representative of Alucoil® North America, LLC FR and PE ACM and is provided for technical evaluation purposes.
- 3 Both the FR and PE Core product meet ICC-ES AC25 Requirements.
- 4 Both the FR and PE Core products are listed with Intertek and can be accessed at: <https://whdirectory.intertek.com>
- 5 " - " indicates not tested
- 6 "N/A" not applicable
- 7 For a complete technical overview of all Alucoil North America Products, visit [www.alucoilnorthamerica.com](http://www.alucoilnorthamerica.com)