

Aludecor Compliance Statement

S.No	Parameters	Units	Standards	Aludecor AL-45 FIREWALL	Aludecor AL-45
Product Composition					
1	Alloy	.....	ASTM B209M	AA 3105	AA 3105
2	Skin Thickness	mm	.....	0.5	0.5
3	Core material	....	.....	Mineral Filled Polymer	Virgin/ First Grade Recycled LDPE
Product Dimension and Tolerance					
4	Panel thickness	mm	.....	4	4
5	Panel size	mm	.....	Width = 1220 mm; 1000mm & 1100mm (Customized) Length = Up to 6100 mm	Width = 1220 mm; 1000mm & 1100mm (Customized) Length = Up to 6100 mm
6	Tolerance in Width	mm	.....	±2.0 mm	±2.0 mm
7	Tolerance in Length	mm	.....	±4.0 mm	±4.0 mm
8	Tolerance in Thickness (Panel)	mm	.....	±0.2 mm	±0.2 mm
9	Tolerance in Thickness (Coil)	mm	.....	± 0.03 mm	± 0.03 mm
10	Squareness	mm	.....	Maximum 5.0 mm	Maximum 5.0 mm
11	Bow	mm/m	.....	Maximum 0.5% of width and/or length	Maximum 0.5% of width and/or length
12	Paint Thickness	.....	.....	Double Coat PVDF/Lumiflon: 24 μ -28 μ Triple Coat PVDF: 30 μ -35 μ Single Layer Anodized: 10 μ	Double Coat PVDF/Lumiflon: 24 μ -28 μ Triple Coat PVDF: 30 μ -35 μ Single Layer Anodized: 10 μ
13	Surface defects	.....	....	The surface shall not have any irregularities such as roughness, buckling and other imperfections in accordance with our visual inspection rules.	The surface shall not have any irregularities such as roughness, buckling and other imperfections in accordance with our visual inspection rules.
Principal Properties					
14	Panel weight	kg/m ²	.....	7.5	5.5
15	Thermal expansion	×10-6 /°C	.....	24	24
Mechanical Properties of Aluminium Composite Material (ACM)					
16	Min. Tensile Strength	MPa or N/mm ²	ASTM E8	40	40
17	Min. 0.2% Proof Stress	MPa or N/mm ²	ASTM E8	35	35

18	Elongation (Min.)	%	ASTM E8	5	5
19	Flexural Strength	MPa or N/mm ²	ASTM C393	110	110
20	Min. Flexural Modulus	MPa or N/mm ²	ASTM D790	11000	11000
21	Min. Shear Strength	MPa or N/mm ²	ASTM D732	18	18
Mechanical Properties of Aluminium Alloy					
22	Tensile Strength	MPa or N/mm ²	ASTM E8	Min 150	Min 150
23	Modulus of Elasticity	MPa or N/mm ²	ASTM E8	70000	70000
24	Min. Elongation, E	%	ASTM E8	2	2
25	Min. 0.2% proof stress	MPa or N/mm ²	ASTM E8	110	110
Paint Finish					
26	Coating Type	.....	AAMA 2605	PVDF based fluorocarbon coating/ Lumiflon	PVDF based fluorocarbon coating/ Lumiflon/ Anodized
27	No. of Coats	.....	AAMA 2605	Solid Colors-25 microns Metallic Colors-28 microns Three Coats- 30 -35 microns	Solid Colors-25 microns Metallic Colors-28 microns Three Coats- 30 -35 microns
28	Coating warranty	.....	AAMA 2605	10 - 20 yrs	10 - 20 yrs
29	Thermal resistance (R-Value)	m ² K/W	DIN 52612	0.013	0.013
30	Heat Transmission Coefficient (U-Value)	W/m ² K	DIN 4108	79	79
31	Water absorption	% (23±1 °C for 24 Hours)	ASTM D570	Nil	Nil
32	Surface Resistivity	ohm/Square (Static Charge)	ASTM D257	3X10 ¹¹	3X10 ¹¹
33	Color and gloss	%	AAMA 2605	15-60	15-60
Fire Tests for General and External Cladding Material					
34	EU	Class	EN 13823, EN ISO 11925-2, EN 13501-1	Class B	Class D
35	Germany	Class	DIN4102 Part 1	Class B1	Class B2
General Properties					
36	Formability (T-bend)	T	NCCA II-19 ASTM D1737-62	2T, no cracking	2T, no cracking
37	Reverse impact-crosshatch	....	NCCA II-5	No pick off	No pick off

38	Hardness-pencil	min	ASTM D3363-92a	H	H
39	Adhesion Dry Wet Boiling water	.....	ASTM D3359, method 8 37.8°C, 24 hrs. 100°C, 20 min.	No pick off No pick off No pick off	No pick off No pick off No pick off
40	Abrasive resistance	litres/mil	ASTM D968-93 (Falling sand)	40	40
41	Chemical resistance: Muriatic acid, 10%HCl, 72hrs Sulphuric acid, 20%H2SO4, 18hrs Sodium hydroxide, 20%NaOH, 1hr Mortar, pat test, 24hrs Detergent, 3%solution, 38°C, 72hrs	....	ASTM D1308-87 ASTM D1308-87 ASTM D1308-87 AAMA2605 ASTM D2248-93	No change No change No change No change No change	No change No change No change No change No change
Weatherability					
42	Weather-o-meter test Colour retention: Gloss retention: Chalk resistance:	.....	ASTM D2244-93 ASTM D523-89 ASTM D4214-89	Max. 5 units after 4000 hrs 70% after 4000 hrs Max. 8 units after 4000 hrs	Max. 5 units after 4000 hrs 70% after 4000 hrs Max. 8 units after 4000 hrs
43	Salt spray resistance	Hrs	ASTM B117-90	Blister-10, scribe-8, after 4000 hrs, 35°C salt fog	Blister-10, scribe-8, after 4000 hrs, 35°C salt fog
44	Humidity-thermal	Hrs	ASTM D2246-87	No blister, no cracking After 15 cycles of 38°C 100%RH for 24hrs and -23°C for 20hrs	No blister, no cracking After 15 cycles of 38°C 100%RH for 24hrs and -23°C for 20hrs
45	Humidity resistance	Hrs	ASTM D2247-94	No change After 4000 hrs, 100%RH, 35°C	No change After 4000 hrs, 100%RH, 35°C