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ALUSTRA FR-A2 CORE

ALUSTRA FR-A2 Core panel sheets are a non-combustible, non-toxic and environmentally friendly product. The organic mineral filled core makes the A2 Core Panel sheets one of the highest fire-retardant panel sheets currently in the industry and have been tested in accordance with various fire standards globally.

SN.	PROPERTIES	STANDARD	UNIT / REF	3 mm	4 mm	6 mm
Principal Properties						
1	Thickness Sheet	-	mm	4 mm		
2	Skin thickness	-	mm	0.5 mm		
3	Alloy	-	-	(1100, 3003, 3105, 5005) H16		
4	Weight	-	±0.5 Kg/m²	7	8.3	12
5	Standard width	-	mm	1000, 1250, 1500, 1600		
Product Tolerances						
6	Width	-	mm	±2		
7	Length	-	mm	±3		
8	Thickness	-	mm	±0.2		±0.3
9	Squareness	-	mm	max 5		
10	Bow	-	%	±0.5		
Mechanical Properties						
11	Tensile Strength of Aluminum	ASTM E8	MPA or N/ mm²	≥ 130		
12	0.2 % Proof stress	ASTM E8	MPA or N/ mm²	≥ 90		
13	Elongation	ASTM E8	%	≥ 5		
14	Modulus of elasticity, E	ASTM C 393	GPA or KN/mm²	70		
15	Rigidity, E^{xl}	ASTM C 393	KN mm²/mm	125	240	240
Acoustical Properties						
16	Sound Transmission Loss	ASTM E413	dB	27		
17	Sound Absorption Factor	ISO 354	-	0.05		

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Thermal properties						
18	Deflection Temperature	ASTM D648	°C	110		
19	Thermal Resistance R	ASTM C518	m^2 K/W	0.002		
20	Temperature Resistance		°C	-50 to +80		
21	Linear Thermal Expansion	EN 1999 1-1	mm/m @ 100°C	2.4		
Core Fire Performances						
22	Core	-	-	Excellent Performance Non-Combustible Mineral Filled Core		
23	Reaction to Fire	EN 13501-1	-	A2, S1, d0		
24	Surface Burning CHARECTERISTICS	ASTM E84	-	Class A / Class 1		
25	Self-Ignition Temp	ASTM D1929	-	Not Less Than 343°C		
26	Exterior Non-Load Bearing Wall Assembly	NFPA 285	-	-	Passe various Assembly Tests (Listings Reference: **MH-AED-001 & MH-AED-004 Rev 0**)	-
27	Fire Rating	ASTM E 119	-	-	**3 hr mins**	-
Coating Performances						
28	No of Coats	AAMA 2605-13	-	Standard 2 coat / 3 Coat / 4 Coat		
29	Type / Finish		-	Standard NANO PVDF / PVDF / FEVE / HDPE		
30	Gloss @ 60°c		%	20-40 / 20-80		
31	Adhesion (Dry Condition)		-	No Adhesion Loss		
32	Pencil Hardness		-	Min HB		

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Test Item	Standard Index	ALUSTRA Actual and Test Value
Coating Thickness	≥ 25 μm	≥ 28 μm
Gloss Deviation	gloss ≥70, max permissible deviation ≤ 5	deviation = 1.0
	gloss＜70, max permissible deviation ≤ 10	
Color Deviation, ASTM D2244	< 2.0 units	< 2.0 units
Pencil Hardness	≥ HB	3H
Coating Flexibility, ASTM D4145	≤2T	1T
Adhesion Grade	in grid way: Grade 0 in circle way: Grade 1	in grid way: Grade 0 in circle way: Grade 1
Impact Resistance	No peel-off, no crack at 50 kg.cm	No peel-off, no crack
Abrasion Resistance, ASTM D968	≥ 5L/um	≥ 7.7L/um
Hot Water Resistance	No color change, crack & peel-off at 98～100C in 120 min	No color change, no crack & no peel-off
Stain Resistance	≤15%	1.03%
Acid Resistance, ASTM D1308	No change	No change
Alkali Resistance, ASTM D1308	No change	No change
Oil Resistance, ASTM D1308	No change	No change
Solvent Resistance, ASTM D2248	No change	No change
Brush Resistance	≥10000 times of no change	No change
Salt Fog Resistance, ASTM B117	≥Grade 2	Grade 1
Aging and Weather Resistance Color Deviation Gloss Retention Grad. Other Aging Performance	 ≤3.0 ≥ Grade 2 Grade 0	 1.9 Grade 1 Grade 0