

TECHNICAL DATA SHEET

APL / TDS / 001 / Rev.09 | Date 07.05.2025



ALUCOPANEL® A2

EUROCLASS A2 - (s1,d0)

Physical Properties

	Test Standard	Tolerance	Result	
			4MM	6MM
Panel Thickness	...	(±) 0.2 mm	4.0 mm	6.0 mm
Weight of the Panel	...	± 0.5 kg/m²	8.2 kg/m²	12.0 kg/m²
Standard Width	...	(±) 2 mm	1000, 1250, 1500, up to 2000 mm	
Length	...	(±) 2 mm	up to 6000 mm Max. 8000 mm	
Skin Thickness	...	(±) 0.02 mm	0.50 mm	

Fire Performance

	Test Standard	Requirement	Result / Certificate Ref. No.	
			4MM	6MM
Reaction to Fire	EN 13501-1	Class A2, s1, d0	TBW 0300135	
Surface Burning Characteristics	ASTM E84	(FSI) 25-0 (SDI) 450-0	FSI 15, SDI 15 Class A	FSI 15, SDI 30 Class A
Self Ignition Temperature (ACP)	ASTM D 1929	Not less than 343°C	SIT (842°F) 450°C, FIT (842°F) 450°C	SIT (842°F) 450°C, FIT (842°F) 450°C
Self Ignition Temperature (CORE)			SIT (950°F) 510°C, FIT (950°F) 510°C	SIT (950°F) 510°C, FIT (950°F) 510°C
Non-Loadbearing Ventilated Façade System	BS 8414-1	As per standard	TBW0300140	
Exterior Non-Load Bearing Wall Cladding Assemblies	NFPA 285	As per standard	TBW	CAVITY (mm)
			TBW0300140	125
			TBW0300148	75
			TBW0300204	100
			TBW0300224	75
			TBW0300560	250
			TBW0300620	280
			TBW0300649	300
			ESL-25-11883	730
			ESL-25-11950	840
Roof Covering Assembly (0-10° from the horizontal plane)	EN 13501-5:2016	B _{ROOF} (t4)	TBW0300648 without any packing material on steel structure with 40 cm Void ideal for canopies and feature.	-
Roof Covering Assembly with Mineral Wool Insulation (10-70° from the horizontal plane)	EN 13501-5:2016	B _{ROOF} (t4)	TBW0300738 With thermal insulation fixed direct at rear face of ACP, on Alum structure with 300mm Void ideal for Continuous Roof Covering.	-

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Fire Performance

	Test Standard	Requirement	Result	
			4MM	6MM
Roof Covering Assembly (10-70° from the horizontal plane)	EN 13501-5:2016	B _{ROOF} (t4)	TBW0300739 without any packing material on Alum structure with 300mm Void ideal for canopies and feature.	-

Coil Specification

	Test Standard	Requirement	Result	
			4MM & 6MM	
Alloy / Temper	ASTM B209	...	3105 - H16	5005 - H16
Tensile Strength	ASTM E8	172 - 221 N/mm ²	196 N/mm ²	188 N/mm ²
Yield Strength	ASTM E8	Min. 145 N/mm ²	190 N/mm ²	183 N/mm ²
Elongation	ASTM E8	Min. 1.0 %	4.2 %	3.3 %
Modulus of Elasticity	ASTM E111	Measure Value	69 Gpa	

Mechanical Properties

	Test Standard	Requirement	Result	
			4MM	6MM
Peel off Strength @ 180°	ASTM D903	10 kg/ 25mm	15.84 kg/25mm	23.2 kg/25mm
Climbing Drum Peel	ASTM D1781	Measure Value	20.6 kg/25mm	20.6 kg/25mm
Shear Strength	ASTM C 273	3.2MPa	3.25 MPa	3.27 MPa
Tensile Strength	ASTM E8	> 35 MPa for 4mm >25 MPa for 6mm	41.23 MPa	29.83 MPa
0.2% Proof Stress	ASTM E8	Measure Value	49.0 Mpa	35.0 Mpa
Punch Shear Test	ASTM D 732	20 MPa	22.23 MPa	20.87 MPa
Modulus of Elasticity	ASTM C393	Measure Value	22,800 Mpa	22,800 Mpa
Flexural Strength	ASTM D790-17	Measure Value	106.1 Mpa	106.1 Mpa

Thermal Properties

	Test Standard	Requirement	Result	
			4MM	6MM
Deflection Temperature	ASTM D 648	100°C	250°C	250°C
Linear Thermal Expansion per 100°C	ASTM D 696	2.40 mm/m/ °C	2.40 mm/m/ °C	2.47 mm/m/ °C
Linear Thermal Expansion Coefficient		Measure Value	0.024 mm/ (m °C)	0.0247 mm/ (m °C)
Thermal Conductivity	ASTM C 518	Measure Value	0.11 W/mK	0.10 W/Mk

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ACOUSTICAL PROPERTIES

	TEST STANDARD	REQUIREMENT	RESULT	
			4MM	6MM
Sound Transmission Class	ASTM E413	...	STC 19	

COATING PROPERTIES AND PERFORMANCE (TOP COAT)

	TEST STANDARD	REQUIREMENT	RESULT	
			4MM	6MM
Coating Thickness	ASTM D 1400	≥ 25µm	≥ 25µm	
Weathering Resistance	ASTM C 481	A. Shear Strength B. Film Adhesion C. Impact Resistance	A. 3.20 Mpa (after exposure) B.1. Dry Adhesion - No removal of film B.2. Wet Adhesion - No removal of film B.3. Boiling Water - No removal of film C. Impact Resistance - No removal of film	
Corrosion Resistance (Humidity Resistance & Salt Spray)	AAMA 2605 ASTM D 2247 ASTM D 714 ASTM B 117	A. Humidity Resistance (@4000 hours exposure) B. Salt Spray Resistance (@4000 hours, 35°C)	A. No formation of blisters B.1 Scribed - rating of 9 B.2. Unscribed - rating of 10	
Chemical Resistance	ISO 2812 -1: 2014	A. Acid Resistance B. Alkali Resistance C. Oil Resistance D. Solvent Resistance	A. NO CHANGE B. NO CHANGE C. NO CHANGE D. NO CHANGE	
Abrasion Resistance	ASTM D 968	≥ 50 L/mil	52.1 L/mil	
T-Bend Test	ASTM D 522	2T (No Cracks)	2T (No Cracks)	
Pencil Hardness	ASTM D 3363	≥ H	≥ H	
Film Adhesion DRY (@27 °C) WET (@38 °C, 24hrs) BOILING (@100 °C, 20hrs)	AAMA 2605 (Clause 7.4)	No removal of film	No removal of film within or outside of the cross- hatched area; No blistering was observed	
Impact Resistance Test 50 kg-cm	AAMA 2605 (Clause 7.5)	No removal of film	No removal of film	

REMARK: Coating Performance results are complying with AAMA 2605-13 Requirements

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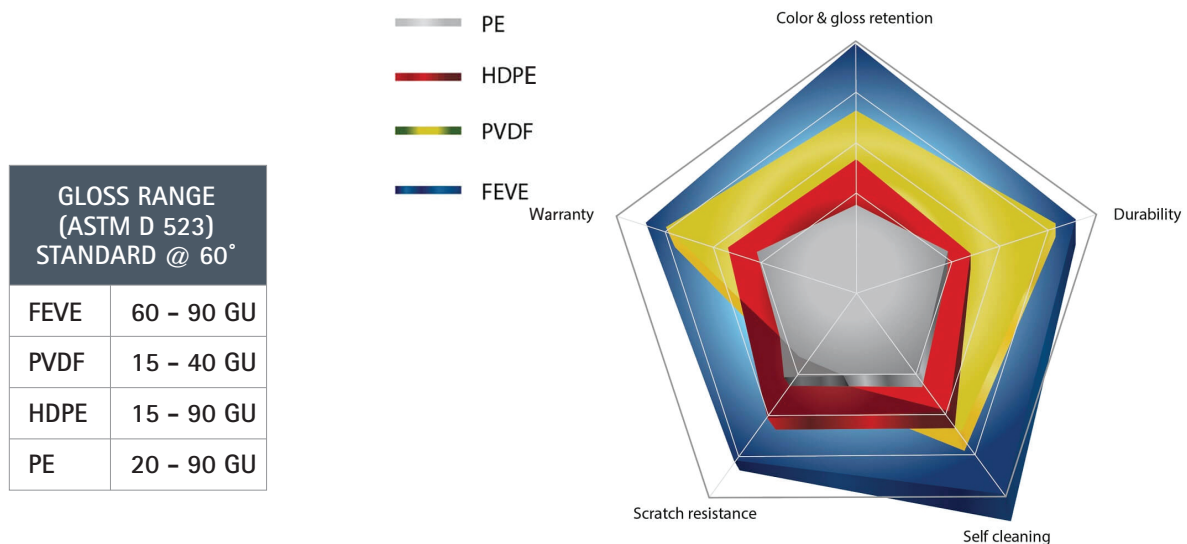
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Coating Properties And Performance

Schematic Diagram									
Coating System								DFT	
				FEVE	PVDF	HDPE	PE		
CLEARCOAT	CLEARCOAT			FEVE	PVDF	HDPE	PE	13-15µm	
INK	INK				PVDF	HDPE		3-5µm	
TOPCOAT	TOPCOAT	4COAT/LAYER	3COAT/LAYER	PVDF	PVDF	HDPE	PE	18-20µm	
PRIMER	PRIMER			PRIMER				5-7µm	
SUBSTRATE	PRETREATMENT	PRETREATMENT		CHROME				<1µm	
				ALUMINUM				METAL	

Coating Gloss Limitation & Comparison With Various Coatings



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Coating Properties And Performance (Bottom/Service Coat)			
	Test Standard	Requirement	Result
Dry Film Thickness	ASTM D 7091	5-7 µm	6 µm
Coating Flexibility T-bend Test	ASTM D 4145	2T	2T
Solvent Resistance Test	ASTM D 4752	Bearable @ 50X Rubbing	> 50 DR
Film Adhesion Test by Crosshatch	AAMA 2605; ASTM D3359-09e2	No Removal of Paint	PASSED
Film Adhesion Test by Boiling Water	AAMA 2605	No Removal of Paint	PASSED
Backside Printing Information Et Direction		As per Material Description	PASSED
Coating type			Polyester

Important Note: Backside of the panels are pre-coated and may come in different colors to embellish the surface Appearance because the back of the cladding is not meant for display purposes.

REPORTS ARE BASED ON THE AVERAGE ANALYSIS RESULT