



TECHNICAL DATA SHEET

APL / TDS / 005 / Rev.08 | Date 18.07.2026



ALUCOPANEL® A1

EUROCLASS A1 in accordance with BS EN 13501-1:2018

Physical Properties			
	Test Standard	Tolerance	Result
Panel Thickness	Calibrated Caliper	(±) 0.2 mm	4.0 mm
Weight of the Panel	Calibrated weighing device	± 0.5 kg/m²	8.0kg/m²
Standard Width	...	(±) 2 mm	1000, 1250, 1500, up to 2000 mm
Length	...	(±) 4 mm	up to 6000 mm Max. 8000 mm
Skin Thickness (Top / Bottom)	Caliper	(±) 0.05 mm	0.50 mm
Fire Performance			
	Test Standard	Requirement	Result / Certificate Ref. No.
Reaction to Fire Classification	EN 13501-1	Class A1	TBW 0300647
Assessment Parameter	Requirement	Result	Status
Gross Heat of Combustion (Whole Product – 4mm ACP) (ISO 1716)	≤ 3.0 MJ/kg	0.4 MJ/kg	PASS
Gross Heat of Combustion (Core Material – 3mm) (ISO 1716)	Non-combustible mineral core	–2.3 MJ/kg	PASS
Sustained Flaming (ISO 1182)	No sustained flaming	0 Seconds	PASS
Furnace Temperature Rise (ISO 1182)	≤ 30°C	14°C	PASS
Mass Loss (ISO 1182)	≤ 50%	33%	PASS
FIGRA _{0.2MJ} (EN 13823)	≤ 20 W/s for A1	0 W/s	PASS
THR _{600s} (EN 13823)	≤ 4 MJ for A1	0.4 MJ	PASS
Smoke Production (EN 13823)	Very limited	SMOGR _A ≤ 30m²/s²	PASS
Flaming Droplets (EN 13823)	None permitted	None	PASS

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Fire Performance				
Test Standard		Requirement	Result / Certificate Ref. No.	
Self Ignition Temperature (CORE)	ASTM D 1929	Not less than 343°C	SIT: > 750°C FIT: > 750°C	
Self Ignition Temperature (ACP)	ASTM D 1929	Not less than 343°C	SIT: > 525°C FIT: > 524°C	
Full-scale fire performance assessment of external cladding systems	BS 8414 Test and Certification	...	In Progress	
Exterior Wall Cladding System	NFPA 285	Pass as per standard	TBW	CAVITY (mm)
			TBW0300672	300
Roof Covering Assembly with Mineral Wool Insulation (45–70° from the horizontal plane)	EN 13501–5	B _{ROOF} (t4)	TBW0300736 With thermal insulation fixed direct at rear face of ACP, on Alum structure with 300mm Void ideal for Continuous Roof Covering.	
Roof Covering Assembly (0–10° from the horizontal plane)	EN 13501–5	B _{ROOF} (t4)	TBW0300737 without any packing material on Alum structure with 300mm Void ideal for canopies and feature.	
Structural Design		Test Standard		Current Status
BS EN 1990:2002 + A1:2005		Eurocode Basis of Structural Design		In Progress
BS EN 1991-1-4:2005 + A1:2010		Eurocode 1 Actions on Structures (Wind Actions)		In Progress
UK National Annex to BS EN 1990		Structural Design National Annex (United Kingdom)		In Progress
UK National Annex to BS EN 1990		Wind Actions National Annex (United Kingdom)		In Progress



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CWCT Performance				
		Test Standard	Result / Report No.	
Weathertightness testing for rainscreen		CWCT	N950-23-18492	
Assessment Parameter		Requirement	Result	Status
Wind Resistance – Serviceability (CWCT)	No permanent damage after testing at +1200 Pa and –1200 Pa.		No damage on the test sample was observed	Pass
	Within the permissible deflection limits (L/90) when ±1200 Pa is applied Measured Deflection < 9.8mm		Measured Deflection: 7.8 and –6.0	Pass
Wind Resistance – Safety (CWCT)	No permanent damage after testing at +1800 Pa and –1800 Pa.		No damage on the test sample was observed	Pass
	Within the permissible residual deflection (L/500) when ±1800 Pa is applied Measured Residual Deflection < 1.8mm		Measured Residual Deflection: 0.4 and –0.2	Pass
Watertightness – Dynamic (CWCT)		No water penetration to the internal face of the sample at 600 Pa throughout testing.	No water penetration was observed throughout the test	Pass
Impact Resistance – Soft and Hard Body (CWCT TN76)		Serviceability: Class 1 to Class 5 Safety: Negligible, Low, Moderate, High Risk	Serviceability: Class 2 – only slight cosmetic damage Safety : Negligible Risk – no damage affecting structural integrity.	Pass
Controlled Dismantle (CWCT)		No water penetration, no concealed damage, and no discrepancies from the approved drawings after dismantling	During dismantling, no water penetration or discrepancies from the drawings were found	Pass
Coil Specification (Top And Bottom Coil)				
		Test Standard	Requirement	Result
Alloy / Temper		ASTM B209	...	3105 – H16 5005 – H16
Aluminium and aluminium alloys		BS EN 573-3:2019	...	In Progress
Chemical composition and form of wrought products				
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	

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Mechanical Properties			
		Requirement	Result
Peel off Strength		ASTM D 903	10 kg / 25 mm
Climbing Drum Peel		ASTM D1781	measure value
Shear Strength		ASTM C 273	3.2 MPa
Tensile Strength		ASTM E 08	> 35 MPa for 4mm
0.2% Proof stress		ASTM E8	measure value
Punch Shear Test		ASTM D 732	20 MPa
Modulus of Elasticity		ISO178-2019	measure value
Flexural Strength		ISO178-2019	measure value
CE Marking		Test Standard	
CE Certification Product	EAD 210046-01-1201 Thin metal composite sheets		In Progress
Test and Certification			
Tensile Performance	Tensile strength, yield strength, elongation,		In Progress
- Core Included	tensile modulus of elasticity of the complete ACP, including the core BWR4 Cl. 2.2.3 (EN ISO 527-1 and 2)		
Tensile Performance	Tensile strength, yield strength, elongation, and tensile		In Progress
- Without core	modulus of elasticity of the aluminium skin material without the core BWR4 Cl. 2.2.3 (EN ISO 527-1&2)		
Flexural Performance	Bending strength and flexural behaviour of		In Progress
- Bending performance in	the ACP under a four-point bending load		
four-point test arrangement	BWR4 Cl. 2.2.5 (EN ISO 527-1)		
Shear Performance -	Shear strength and shear modulus of elasticity		In Progress
Shear strength,	of the ACP core/composite structure		
shear modulus of elasticity	BWR4 Cl. 2.2.6 (EN ISO 527-1)		
Torque Peel Strength	Strength of the bond between the aluminium skin and the core by applying a rotational/peeling force		In Progress
	BWR4 Cl. 2.2.7 (ASTM D1781-98)		

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Hard body impact resistance	Resistance of the ACP to impact from a hard object BWR4 Cl. 2.2.8 (ISO 7892)	In Progress
Bending Strength after Hygrothermal cycles	Assesses the effect of hygrothermal ageing on the panel's flexural performance Aspects of durability Cl. 2.2.11.1 (EOTA TR 038, ISO 554)	In Progress
Torque Peel Strength and Bending Strength after immersion for 6 hours in boiling water at 90 °C	Resistance to moisture and elevated -temperature degradation Aspects of durability Cl. 2.2.11.2 (EOTA TR 038, ISO 554)	In Progress
Torque Peel Strength and Bending Strength after immersion for 500 hours in water at 20 °C	Resistance of the ACP to long-term water exposure aspects of durability Cl. 2.2.11.3 (EOTA TR 038, ISO 554)	In Progress
Torque Peel Strength and Bending Strength after freeze-thaw cycles	Resistance to degradation caused by cyclic temperature changes and moisture Aspects of durability Cl. 2.2.11.4 (EOTA TR 038, ISO 554) BWR4 Cl. 2.2.5 (EN ISO 527-1)	In Progress
Torque Peel Strength and Bending Strength after Long-term exposure to heat (2500 hours at hot dry air 80 °C)	Resistance of the ACP to thermal ageing and heat-induced degradation Aspects of durability Cl. 2.2.11.5 (EOTA TR 038, ISO 554)	In Progress
CE Certification Scope Extension	EAD 090062-00-0404 : 2018 Kits for external wall claddings mechanically fixed	In Progress
BBA Agrément Certification	British Board of Agrément product certification for ALUCOPANEL® A1	In Progress
EAD 090062-00-0404:2018	European Assessment Document for mechanically fixed external wall cladding kits	In Progress

Remark: All tests are currently in progress under Contract No. Z060260032.

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Thermal Properties			
	Test Standard	Requirement	Result
Temperature for Thermal deformation	ASTM D 648	100°C	149°C
Linear Thermal Expansion per 100°C	ASTM D696	2.4 mm/m/c°	2.4 mm/m/c°
Thermal Conductivity	ASTM C 518	Measure Value	0.129 W/Mk
Coating Properties And Performance (Top Coat Systems & Choices)			
	Test Standard	Requirement	Result
Coating Thickness	ASTM D 1400	25 µm	25 µm
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	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	55.5 L/mil
Pencil Hardness	ASTM D 3363	H	H
T-Bend Test	ASTM D 522	2T (No Cracks)	2T (No Cracks)
Coating Properties And Performance (Top Coat Systems & Choices)			
	Test Standard	Requirement	Result
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			



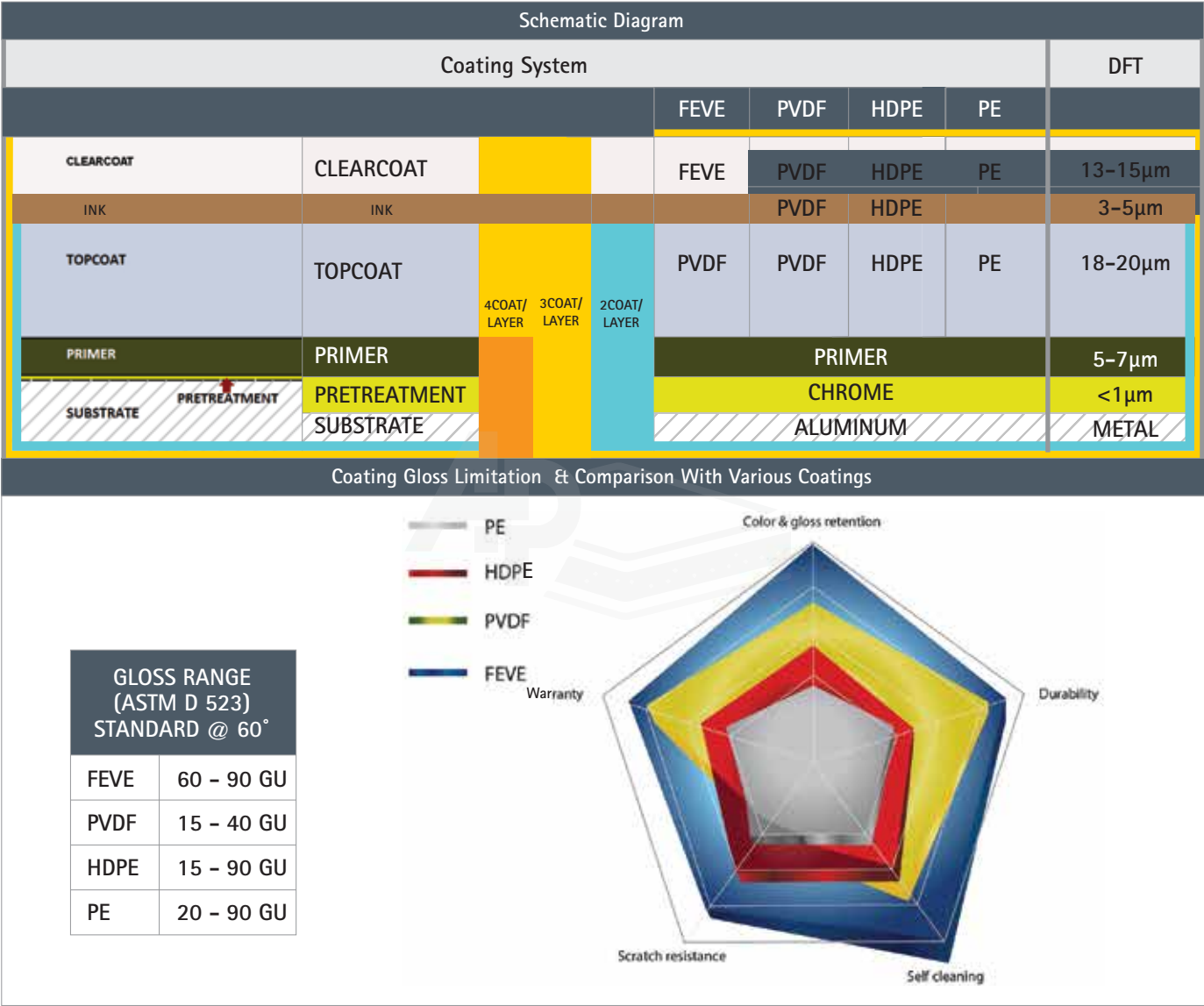
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Important Note: Backside of the panels are pre-coated and may come in different colors to embellish the surface Appearance because the back of the cladding is not meant for display purposes.

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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 & Direction		As per Material Description	PASSED
Coating type			Polyester
Anodizing Properties and Performance (Choices of Anodized systems for Top Aluminium skin)			
Product Description	This Technical Data Sheet covers anodized finishes produced on aluminium extrusions and solid aluminium sheets using a sulfuric acid anodizing process supported by Italian anodizing technology and chemicals.		
Applicable Substrates	Aluminium composite panel (5005 alloy)		
Anodic Layer Properties	Coating Type: Sulfuric acid anodic oxide Thickness Range: Typically 10–25 microns, depending on project requirements Colouring Options: Natural, Bronze, Black, Champagne, Grey, Blue (interference) Sealing: Cold sealing process		
Appearance	Uniform metallic finish Colour consistency within normal coil anodizing batch tolerances (Delta E ≤ 3.0) Final appearance depends on alloy type, extrusion quality, and surface condition		
Applications	Façade / Cladding • Super High-rise buildings • High-rise buildings • Malls • Theme Parks • Schools • Hospitals • Any Building		
Notes	Minor colour variation may occur between alloys and different extrusion batches. Surface imperfections in raw aluminium may become visible after anodizing. Process parameters (voltage, additives, chemistry, and timings) are proprietary and based on Italtelco guidelines.		
Disclaimer	This Technical Data Sheet provides general information about anodized finishes on aluminium extrusions and sheets. Performance may vary based on alloy selection, fabrication methods, and installation environment.		

REPORTS ARE BASED ON THE AVERAGE ANALYSIS RESULT