

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/m <sup>2</sup>	8.2 kg/m <sup>2</sup>	11.7 kg/m <sup>2</sup>
Standard Width	...	(±) 2 mm	1000, 1250, 1500	
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 B, s1, d0	TBW0300136	
Surface Burning Characteristics	ASTM E84	(FSI) 25-0 (SDI) 450-0	FSI 15, SDI 30 Class A	FSI 15, SDI 40 Class A
Self Ignition Temperature (ACP)	ASTM D 1929	Not less than 343°C	SIT (783°F) 417°C, FIT (779°F) 415°C	SIT (849°F) 454°C, FIT (846°F) 452°C
Self Ignition Temperature (CORE)			SIT (777°F) 414°C, FIT (763°F) 406°C	SIT (777°F) 414°C, FIT (763°F) 406°C
Exterior Non-Load Bearing Wall Cladding Assemblies	NFPA 285	As per standard	TBW0300169	TBW0300118
Roof Covering Assembly (0-10° from the horizontal plane)	EN 13501-5	B <sub>ROOF</sub> (t4)	TBW0300740 without any packing material on Alum structure with 300mm Void ideal for canopies and feature.	-
COIL SPECIFICATION (TOP AND BOTTOM COIL)				
	TEST STANDARD	REQUIREMENT	RESULT	
			4MM	6MM
Alloy / Temper	ASTM B209	...	3105 - H16	
Tensile Strength	ASTM E8	172 - 221 N/m <sup>2</sup>	196 N/mm <sup>2</sup>	
Yield Strength	ASTM E8	Min. 145 N/m <sup>2</sup>	190 N/mm <sup>2</sup>	
Elongation	ASTM E8	Min. 1.0 %	4.2 %	
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	17.57 kg/25mm	15.6 kg/25mm
Climbing Drum Peel	ASTM D1781	Measure Value	17.3 kg/25mm	17.3 kg/25mm
Shear Strength	ASTM C 273	≥ 3.2MPa	3.25 Mpa	3.23 Mpa
Tensile Strength	ASTM E8	> 35MPa for 4mm >25MPa for 6mm	42.83 MPa	29.63 MPa
0.2% Proof Stress	ASTM E8	Measure Value	47.0 MPa	34.0 MPa
Punch Shear Test	ASTM D 732	≥ 20 MPa	22.29 MPa	21.93 MPa
Modulus of Elasticity	ASTM C393	Measure Value	19,600 Mpa	19,600 Mpa
Flexural Strength	ASTM D790-17	Measure Value	110.7 Mpa	110.7 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	≥ 2.4 mm/m/ °C	2.4 mm/m/ °C	2.6 mm/m/ °C
Thermal Conductivity	ASTM C 518	Measure Value	0.12 W/mK	0.23 W/mK
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	52.7 L/ mil	
T-Bend Test	ASTM D 522	2T (No Cracks)	2T (No Cracks)	

## COATING PROPERTIES AND PERFORMANCE

	TEST STANDARD	REQUIREMENT	RESULT	
			4MM	6MM
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**

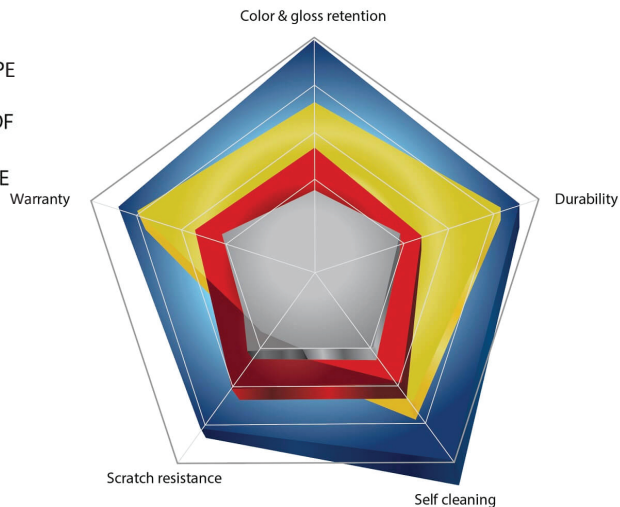
### SCHEMATIC DIAGRAM

COATING SYSTEM								DFT		
				FEVE	PVDF	HDPE	PE			
CLEARCOAT	CLEARCOAT	4COAT/ LAYER	3COAT/ LAYER	2COAT/ LAYER	FEVE	PVDF	HDPE	PE	13-15µm	
INK	INK				PVDF	HDPE				3-5µm
TOPCOAT	TOPCOAT				PVDF	PVDF	HDPE	PE		18-20µm
PRIMER	PRIMER					PRIMER			5-7µm	
	PRETREATMENT					CHROME			<1µm	
SUBSTRATE	SUBSTRATE					ALUMINUM			METAL	

### COATING GLOSS LIMITATION & COMPARISON WITH VARIOUS COATINGS

GLOSS RANGE (ASTM D 523) STANDARD @ 60°	
FEVE	60 - 90 GU
PVDF	15 - 40 GU
HDPE	15 - 90 GU
PE	20 - 90 GU

-  PE
-  HDPE
-  PVDF
-  FEVE



**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

**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**