TEST REPORT

Report No.: METS-R 12859-01/2023 Rev.01

Client / Establishment	: M/s. Eurocon Building Industries FZE P.O.Box: 49990, Phase 1, Sharjah United Arab Emirates

Sample ID	: METS-S23-12859-01
Sample Receiving Date	: 03/11/2023
Reporting Date	: 03/02/2024
Date of Analysis	: 03/11/2023-03/02/2024
Tested by	: YA
Issue No	: 02 (Re-Issue Date: 03/02/2024)

Sample Information:

Sample Description	: Aluminium Composite Panel- FR-A2 4mm (FR2-ACP)
Brand Name	: Alubond

Brief Evaluation of the Results

	Test	Compliance
METS-S23-12859-01	Physico-Chemical Analysis	Pass

#The tested parameter comply with SASO 2752:2019 specification limit

The corresponding test results are furnished in following page

Prepared by

for Chemist
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Date of analysis: 03/11/2023-03/02/2024

Test Results:

Parameter		Test Method	Unit	Result	Specification Limit: SASO 2752:2019
Material					
Dimension	Length*	SASO 2752:2019 Cl. 10.3.1	mm	300.51	±3
	Width*	SASO 2752:2019 Cl. 10.3.1	mm	300.63	±2
	Thickness	SASO 2752:2019 Cl. 10.3.2	mm	4.12	±0.2
Deviation of diagonal*		SASO 2752:2019 Cl. 10.3.3	mm	1.24	≤5
Straightness at sides*		SASO 2752:2019 Cl. 10.3.4	mm/m	0.18	≤1
Warpage		SASO 2752:2019 Cl. 10.3.5	mm/m	2.33	≤5
Appearance of the panel					
Wave		SASO ISO 4628 Parts (1 to 5,7,10 / 2016) part 6 / 2011 & part 8 / 2012	-	Absent	Not allowed
Bubble			-	Absent	Not allowed
Spot-Size			mm	Not observed	≤3
Spot-Number			-	Not observed	≤3/m²
Cut			-	Absent	Not allowed
Concave-Convex			-	Absent	Not allowed
Scratch			-	Absent	Not allowed
Stain			-	Absent	Not allowed
Color Deviation		SASO ASTM D 2244-2014	-	Pass	Non-obvious in visual observation, ΔE≤2
Panel mechanical properties requirements					
Coating thickness		SASO ISO 2360:2012	µm	30.8	≥30
Pencil hardness*		SASO GSO ISO 15184:2015	-	F-3H	≥HB
Coating Flexibility* (T- Bent test)		ISO 17132:2007	-	Pass	≤2 Without any cracks damage on the coating
Adhesion Grade*		SASO ISO 2409:2020	Grade	0*1	≤1
Impact resistance(kg.cm)*		SASO ISO 6272-2:2014	-	No cracks observed at 50 kg.cm	Shall not be any peel off and cracks
Abrasion resistance		SASO ASTM D 968:2017	Lµm	>2	≥ 2
Stain resistance		SASO ISO 11998:2007	%	3	≤5
Chemical resistance					
Alkali resistance*		SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Acid resistance*		SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Oil resistance*		SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Solvent resistance*		SASO ISO 2812-1:2014	-	Resistant	Shall be resistant
Hot water resistance*		SASO ISO 2812-2:2014		Resistant	Shall be resistant

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Test Results:

Parameter	Test Method	Unit	Result	Specification Limit: SASO 2752:2019
Thermal properties (core thermal properties)				
Heat Deflection Temperature	SASO ISO 75-2:2014	°C	257	85 Min
Linear Thermal Expansion Coefficient	ASTM D 696:16	µm/m-°C	144	200 Max
Self-ignition temperature	SASO ASTM D1929:2015	°C	>350	343 Min
Thermal conductivity of core,K_c	ASTM C 518-17 / BS EN ISO 6946:2007	W/mk	0.2116	-
Thermal resistance of core, R_c		m^2K/W	0.189	-
Internal surface resistance, R_{SI}			0.1098	-
External surface resistance, R_{SE}			0.95	-
Total Thermal resistance, R_T			0.2237	≥0.06
Thermal transmittance (U value)	ASTM C 518-17	$W/m^2.K$	4.47	≤4.5
Drum peel strength	ASTM D1781-98 (2021)	N.mm/mm	108	≥100
Accelerated Weathering at 2000 hours*	SASO ISO 16474-2:2015	-	No change observed	Shall have no change
Gloss Deviation*	SASO ISO 2813:2015	Number	4	≤10
Salt Fog Resistance at 2000 hours*	ISO 11997-1:2017	-	No change observed	Shall have no change
180 degrees Peel Strength*	SASO ISO 8510-2:2008	N/mm	9.56	≥9.0
Shear Strength*	ASTM C393 / C393 M-16	MPa	25	≥22
Bending Strength	ASTM C393/C 393 M-16	MPa	113	≥100
Bend Elastic Module	ASTM C393/C 393 M-16	MPa	22142	≥20000

Note 1: Separate core samples were submitted by the client for thermal resistance and transmittance study
* Parameter accredited by IAS in accordance with ISO/IEC 17025:2017
*1 The edges of the cuts are completely smooth, none of the squares of the lattice is detached.
Remarks: The report was revised to include the test result of salt fog resistance and Accelerated Weathering at 2000 hours

The above test results are only applicable to the sample (s) referred above. This report shall not be reproduced except in full, without the written approval of METS laboratory.

For further clarification of reports, please contact qc@metslab.com

End of Report

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