



DONGWHA MALAYSIA SDN. BHD.
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CERTIFICATE OF ANALYSIS

Customer	T.K.L. INDUSTRIES SDN BHD	PI Number	
Board Thickness & Size	18 mm x 1220mm x 2440mm	Lot Number	914370, 912631
Product Type / Brand	LBR-E2_FDM004658	DO Number	83448662
Production Date	20-01-2025		
Date of Issue (Certificate)	26-03-2025		

PHYSICAL PROPERTIES TEST RESULT

Property		Test Method	Unit	Specification (>15-19.0)	Test Results	Status
Tolerances on Nominal Dimensions	Thickness	EN 324-1	mm	± 0.2	18.11	Passed
	Length	EN 324-1	mm	± 5	2440	Passed
	Width	EN 324-1	mm	± 2	1220	Passed
Squareness Tolerances		EN 324-2	mm/m	≤ 5	1.0	Passed
Edge Straightness Tolerance		EN 324-2	mm/m	< 1.5	0.5	Passed
Moisture Content		EN 322	%	5 - 8	5.9	Passed
Density		EN 323	kg/m3	670 ± 20	665	Passed
Bending Strength		EN 310	N/mm2	≥ 20	31.0	Passed
Modulus of Elasticity in Bending		EN 310	N/mm2	N/A	2275	Not Specified
Swelling in Thickness 24hr		EN 317	%	≤ 14	11.5	Passed
Internal Bond		EN 319	N/mm2	≥ 0.5	0.59	Passed
Surface Absorption (Toluene Test)	Top	EN 382-1	mm	≥ 150	310	Passed
	Bottom	EN 382-1	mm	≥ 150	295	Passed
Formaldehyde Emission Test	Desiccator Method	JIS A 1460	mg/L	F*** :Ave ≤ 0.5 Max ≤0.7 F** : Ave ≤1.5. Max ≤2.1	N/A	N/A
	CARB (Small Chamber Method)	ASTM D6007-14	ppm	Phase 2 MDF Thin Board < 8mm < 0.13 Phase 2 MDF Thick Board > 8.1mm < 0.11	N/A	N/A

Prepared By:-	Checked By	Verified By:-
<i>rosmira</i>	<i>Azuan</i>	<i>Harith</i>
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Rosmira Natasha (QA Supervisor)	Noor Azuan Bin Roslani (QA Executive)	Mohd Harith Bin Haron (QA Manager)