



Surface Engineering & Coating Consultant

A Reliable Paint Testing & Certification Laboratory

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Test Report

M/s. Keybond Industries LLP
17, Super house, Amar Industrial Estate
CST Road Kalina Santacruz (east)
Mumbai - 400098 India.

25/08/2021

Ref. No. letter dated: 17/08/2021
Sample Received: 17/08/2021
Testing Date: 18/08/2021

Project No: SECC-34/2021-2021

Dear Sir,

Subject: - Laboratory Test of the. Aluminum Composite Panel

Enclosed please find the Test report of Aluminum Composite Panel, samples of which were submitted to us:

Brand Name: - SUPERBOND

Sr. No.	Test Method, condition, test methods	Sample ID	Specifications	Results
A	Materials Physical properties of Aluminium Composite Panel			
1	Thickness of ACP Panel Measured Temp. 23±2°C RH 50±5%	01	4.0 mm	4.0 mm
2	ACP Panels weight Measured Temp. 23±2°C RH 50±5%	01	5.5 kg/m ²	6.5 kg/m ²
3	Specific gravity of panels Measured Temp. 23±2°C RH 50±5%	01	1.2 ±5 gm/cm ³	1.68 gm/cm ³
4	Dry film thickness ASTM D 7092 Temp. 23±2°C RH 50±5%	01	26±2 µm	24.6 µm

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B) Mechanical properties of Aluminium Composite Panel				
1	Tensile strength ASTM D 638 Temp. 23±2°C RH 50±5%	TS-01 TS-02	40.0 MPa	51.0 MPa 57.4 MPa
2	% Elongation ASTM D 638 Temp. 23±2°C RH 50±5%	TS-01 TS-02	7.4%	9.13 % 8.50 %
3	Peel test ASTM D 903 Temp. 23±2°C RH 50±5%	PI-01	6±1N/mm	3.36 N/mm
4	Flexural Strength *ASTM D790 Temp. 23±2°C RH 50±5%	F-01	120 MPa	117.02 MPa 119.35 MPa
5	Flexural Modulus *ASTM D790 Temp. 23±2°C RH 50±5%	F-01	17000 MPa	14730.30 MPa
6	Punch shear test ASTM D 732 Temp. 23±2°C RH 50±5%	PS-01	18.2 MPa	18.80 MPa
C) Mechanical properties of Properties of Aluminium Skin/ Coil				
1	Skin thickness Measured Temp. 23±2°C RH 50±5%	TS-01	0.52±0.02 mm	0.52 mm
2	Tensile strength ASTM E8 Temp. 23±2°C RH 50±5%	TS-01 TS-02	Min 140 MPa	150.0 MPa 147.0 MPa
s	% Elongation ASTM E8 Temp. 23±2°C RH 50±5%	TS-01 TS-02	Min. 5.0 %	5.3 % 5.1 %
D) Thermal properties Aluminium Composite Panel				
1	Thermal Resistance 40 to 80 °C	TR-01	-40 to 80 °C (30 minutes & 30 Minutes 80°C)	Passes No any color change
E) Water absorption Coating properties Aluminium Composite Panel				
1.	Coating Type by Chemical	PVDF-01	PVDF	Passed

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	Temp. 23±2°C RH 50±5%			
2.	Water absorption ASTM D 570 Temp. 23±2°C RH 50±5%	01 02	0.5%	0.028 0.049 Average= 0.0385
3.	Chemical resistance 24 hrs., ASTM D 1308 5% HCL 5% NaOH Temp. 23±2°C RH 50±5%	PVDF-01	No discoloration passes the test	Passes No any color change
4.	Pencil Hardness ASTM D 3363 Temp. 23±2°C RH 50±5%	PH-01	2H	2H
5.	Cross hatch adhesion test ASTM D 3359	01	4B-5B	5B
6.	Boiling water test after Cross hatch adhesion test AAMA 2605 100°C	01	4B-5B	5B
7.	T-Bend test Flexibility (T) Temp. 23±2°C RH 50±5%	T-01	2T	Passed

* NABL.



Mr. Rajkumar VK
(Lab Technicon)




Prof. A. S. Khanna
(Approval Authority)

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