



Surface Engineering & Coating Consultant

A Reliable Paint Testing & Certification Laboratory



Test Report

Date: 14/08/2020

M/s. Sommani Alucore India Pvt. Ltd.
16, Panchaamrut bungalows part-1,
Opp. CIMS Hospital Nr.Shukan Mall
Science City Road Ahimedabad-380060

Ref. No. Mail dated: 23/10/2019
Sample Received: 24/01/2020
Testing Date: 28/01/2020

Project No: SECC-124/B/2020

Dear Sir,

Sample Detail: Color code- PS-1- 0.254mm
Panel thickness- 3mm (0.25 mm)
Grade- PVDF

Brand: PRASO

Subject: - Laboratory Test of the PS-1-0.25mm ACP PVDF Coating

Sr. No.	Test Method	Conditions	Results
(A) Physical properties of ACP			
1	ACP thickness Measured by Digital Vernier Caliper	Temperature 23±2°C Relative Humidity 50±5%	3.27mm
2	Alum. Thickness Measured by Digital Vernier Caliper	Temperature 23±2°C Relative Humidity 50±5%	0.27 mm
3	Weight / Meter Measured by Digital Vernier Caliper	Temperature 23±2°C Relative Humidity 50±5%	4.25 Kg/m ²
4	Density Measured by Digital Vernier Caliper	Temperature 23±2°C Relative Humidity 50±5%	1.30 g/cm ³
(B) Mechanical Properties of ACP			
1	Tensile strength ASTM E8	Temperature 23±2°C Relative Humidity 50±5%	30.55 N/mm ²
2	Yield Strength ASTM E8	Temperature 23±2°C Relative Humidity 50±5%	24.2 N/mm ²
3	% Elongation ASTM E8	Temperature 23±2°C Relative Humidity 50±5%	11.20 %
4	Peel test ASTM D 903	Temperature 23±2°C Relative Humidity 50±5%	2.53 N/mm

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5	Flexural Strength *ASTM D790	Temperature 23±2°C Relative Humidity 50±5%	97.1475N/mm ²
6	Flexural Modulus *ASTM D790	Temperature 23±2°C Relative Humidity 50±5%	11581.66N/mm ²
7	Shear strength with Punch shear test ASTM D 732	Temperature 23±2°C Relative Humidity 50±5%	17.2N/mm ²
(C) Mechanical Properties of Aluminum Skin			
1	Skin thickness Measured	Temperature 23±2°C Relative Humidity 50±5%	0.27 mm
2	Tensile strength ASTM E8	Temperature 23±2°C Relative Humidity 50±5%	152.8 N/mm ²
3	Yield Strength ASTM E8	Temperature 23±2°C Relative Humidity 50±5%	145.5 N/mm ²
4	% Elongation ASTM E8	Temperature 23±2°C Relative Humidity 50±5%	4.306 %
(D) Coating properties of ACP			
1.	Coating Thickness ASTM D 7091	Temperature 23±2°C Relative Humidity 50±5%	0.27µm
2.	Coating Type by Chemical	Temperature 23±2°C Relative Humidity 50±5%	PVDF
3.	Coating Type by FTIR	Temperature 23±2°C Relative Humidity 50±5%	PVDF
4.	Pencil Hardness ASTM D 3363	Temperature 23±2°C Relative Humidity 50±5%	2H
5.	Cross hatch adhesion test ASTM D 3359	Temperature 23±2°C Relative Humidity 50±5%	5B
6.	Film Adhesion Boiling Water ASTM D 3359	Temperature 100±2°C After 10 min,	4B
7.	Taber abrasion test *ASTM D 4060, Wheels-CS-17, Load 1kg, cycles 1000	Temperature 23±2°C Relative Humidity 50±5%	48 mg
8.	Gloss Test ASTM D523	Temperature 23±2°C Relative Humidity 50±5%	24.5
9.	Chemicals test on spot test a) 10 % HCL 15 min. b) 2% NaOH 24 hrs. c) 5% HNO ₃ 30 min	Temperature 23±2°C Relative Humidity 50±5%	Passes No sign of Colour change ,Blisters

(E) ACP Weathering Test			
10.	Accelerated Weathering Test *ASTM G154 % Gloss. Color Retention ASTM D 2244 Chalk Resistance ASTM D 4214	Test Duration 4000 hrs. UV Lamp A 8 hrs. UV 60(± 3) °C 4 hrs. condensation 50(± 3) °C	% Gloss Change is 78.64 Avg. $\Delta E = 4.926$ No Chalking
11.	Salt Spray Test *ASTM B 117	Test Duration: 4000 hrs. Test Electrolyte: 5 wt. % NaCl solution at 35°C RH 100%	Passes No discoloration, blistering, cracking, or delamination, of the applied coating on the ACP samples were observed.
12.	Humidity Test *ASTM D 2247	Test Duration: 4000 hrs. Temperature 35-40 ± 2 °C Relative Humidity 95- 100 ± 5 %	Passes No discoloration, blistering, cracking, or delamination, of the applied coating on the ACP samples were observed.

*-This report contains the results pertain to the test samples submitted to Surface Engineering and Coating Consultant (SECC). This report should only be reproduced in full with the permission of SECC. We do not accept any liability if this report is used for an alternative purpose from which it is intended. No addition to, deviation or exclusion from the test methods used were done. *NABL Accredited Test.*

--End of the Report--

Patil

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