

Accelerated UV Weathering, ASTM G155, 1000 hours duration

Adhesion Test, Cross Cut

PH Hot Water and Cold Resistance Test.



PERFORMANCE LAB TEST REPORTS

Executive Summary

Objective: To determine the performance of Protect CPPS system when tested in accordance with ASTM G155

Test Items	Exterior Painted Panels
Material Type	Clear Flexible Topcoat
Part Number	Protect High Gloss CPPS
Test Date	Start 02/06/2019

Test Details / Results

Test	Specification	Pass / Fail
UV Weathering	ASTM G155, 1000hrs	Pass. See Results
Adhesion	Cross Cut, before and after UV	Pass. See Results
Colour	D E – colour change	Pass. See Results

Specimen Information

Conditioning of samples

The samples were received on the 2nd June 2019

Samples were received as being suitable for testing purposes.

Test samples were prepared and conditioned in a controlled atmosphere maintained at a nominal 20°C and 50% Room Humidity for 24 hours before commencement of testing and exposure.

Unique Reference No.

Specimens are allocated unique reference numbers in accordance with our quality Systems **WT-0001**

Sample Disposal

Representative test samples will be stored for 1 month prior to disposal. Should you require these samples, e.g. for QS 9000 materials PPAP submission, please arrange for their return within this period.

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05.06.2019

Test Results

Test:

Test Conditions: Equipment: Xenon Test Chamber XE-1
Irradiance: 0.35 W/m² @340nm
Black Panel Temperature: Light 63°C
Chamber temperature: 61 °C
Exposure Cycle: 102 mins light /18 mins. Light with spray
Exposure period: 1000 hours

Requirements: After exposure the part shall show no fading or colour change according to Customer requirements. In addition, there shall be no cracking, crazing or other deterioration.

Findings: Delta E values measured after 1000 hours - 0.88, 0.87,
0.65 Adhesion showed no change after exposure to testing.

Test: Weathering

Test Conditions: Using X-Rite colour control computer samples were measured before and after testing.

The colour was measured using LAB colour space.

Requirements: Report findings

Findings:

Sample	Observations
Before Testing	High gloss bright surface.
After Testing	No visual colour difference.

Adhesion Test, Cross Cut

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Test:

Test Conditions: A St Andrews cross was scribed into and through the painted surface using a sharp scalpel blade. Scotch 810 self-adhesive tape was firmly applied over the cut and the removed in a single stroke.

Samples were tested before and after weathering.

Requirements: Report any damage to the painted surface or evidence of delamination

Findings:

Sample	Observations
Before testing	GT 0, no evidence of delamination
After Testing	GT 0, no change, no evidence of delamination

Test	Specification	Substrate	Result
Adhesion:	DIN 53151 and B S 3900 Part E6 (0.250 Microns)	2-Pack PU PPS Topcoat	GT 0

Test: Colour Change

Test Conditions: Using X-Rite colour control computer samples were measured before and after testing.

The colour was measured using LAB colour space.

Requirements: Report

findings:

Sample	Observations
Before Testing	L= 58.32, A= -0.47 B= -0.13 C= 0.48, H= 195.94
After Testing	dE 0.87
	dE 0.88
	dE 0.65

PH Hot Water and Cold Resistance Test.

05.06.2019

Test:

Test	Specification	Substrate	Result
Adhesion:	DIN 53151 and B S 3900 Part E6 (1 mm)	2-Pack PU PPS Topcoat	GT 0 GT 0
Cold Resistance:	-18°C / 10 days	2-Pack PU PPS Topcoat	No change in gloss or surface appearance.
Resistance to constant alkali hot water:	70°C, pH 9.5	2-Pack PU PPS Topcoat	24hrs No effect- Adhesion GT0