

Technical Data Sheet

Solutions for Pigments

ASTM G-154 Cyclic QUV/Condensation Test Report:

Two series of 10 panels were supplied to Ferro Corp. for ASTM G154 Cyclic QUV/Condensation Testing. The panels were prepared and provided by Dalton Ent.

The ten series were labeled as follows:

- Tournament Blue, Blue, Light Blue, Red, Beige, Tournament Green, Dark Green, Light Green, Gray, Brown

The panels were not labeled with any additional information. Therefore, for the ease of reportability, the panels were numbered from 1 to 10 for each series.

The testing cycles were set at 4 hours UV exposure (UVA-340 fluorescent lamps) at 60°C +/- 3°C followed by 4 hours in condensation at 50°C +/- 3°C.

An initial color reading was taken before the analysis began, with readings being performed at 250 hour intervals. Color readings were made using a Konica Minolta 3600A Spectrophotometer via CIE L*a*b* settings at Illuminant D65, 10° Observer, Specular, Gloss Included.

The L*a*b* color data to 2000 hours is provided with this report. Once again, there was very little change noted in any of the panel readings – they remained very similar to what was seen after 1750 hours of testing. There was no blistering nor delamination seen on any of the panels.

Overall, it can be stated that, according to the test method utilized in this evaluation, all ten color coatings supplied for this study should be considered very stable under cyclic UV exposure and condensation conditions.

ASTM G154 Cyclic QUV/Condensation Testing for Dalton Ent.

Latexite colors - 250 hours QUV/Condensation							
	ΔL	Δa	Δb	ΔC	ΔH	ΔE	% Strength
Panel 1	-0.05	-0.19	0.13	0.23	0	0.24	100.67
Panel 2	0.04	-0.09	-0.03	0.06	0.07	0.1	99.74
Panel 3	0.12	0.03	-0.11	-0.09	0.07	0.17	98.93
Panel 4	0.2	0.03	0	-0.03	-0.02	0.2	98.45
Panel 5	0.03	-0.1	-0.01	0.08	0.07	0.11	99.83
Panel 6	0.21	0.07	-0.12	-0.12	0.06	0.25	98.29
Panel 7	0	-0.07	-0.05	0.03	0.08	0.09	99.97
Panel 8	0.04	-0.06	-0.05	0.02	0.07	0.09	99.68
Panel 9	-0.08	-0.08	-0.05	0.04	0.09	0.12	100.56
Panel 10	-0.03	-0.01	-0.01	0	0.01	0.03	100.09
Latexite colors - 500 hours QUV/Condensation							
	ΔL	Δa	Δb	ΔC	ΔH	ΔE	% Strength
Panel 1	0.02	-0.1	-0.09	0.19	0.07	0.14	99.87
Panel 2	0.04	-0.09	-0.1	0.1	0.12	0.14	99.41
Panel 3	0.18	-0.03	-0.16	0.07	0.12	0.24	97.79
Panel 4	0.22	-0.05	-0.13	0.02	0.04	0.26	98.06
Panel 5	0.08	-0.12	0.07	0.08	0.07	0.16	99.89
Panel 6	0.1	-0.06	-0.09	0.12	0.11	0.15	97.82
Panel 7	0.09	-0.05	-0.09	0.05	0.05	0.14	98.29
Panel 8	0.03	-0.04	0.03	0.04	0.06	0.06	99.09
Panel 9	-0.04	-0.08	-0.02	0.07	0.03	0.09	100.22
Panel 10	-0.06	-0.04	-0.03	0.05	0.02	0.08	99.37
Latexite Colors - 750 hours QUV/Condensation							
	ΔL	Δa	Δb	ΔC	ΔH	ΔE	% Strength
Panel 1	0.1	-0.12	0.08	0.1	0.05	0.18	100.01
Panel 2	0.15	-0.1	0.01	0.03	0.03	0.18	98.91
Panel 3	0.11	-0.01	-0.08	0.02	0.05	0.14	99.72
Panel 4	0.14	-0.03	-0.02	0.08	0.06	0.14	99
Panel 5	0.02	-0.01	-0.02	0.01	0.03	0.03	100.12
Panel 6	0.03	-0.08	0.1	0.11	-0.08	0.13	98.81
Panel 7	0.23	0.11	-0.09	-0.13	-0.05	0.27	98.19
Panel 8	-0.04	-0.11	0.01	0.09	0.08	0.12	100.54
Panel 9	0.01	-0.09	0.05	0.03	0.04	0.10	100.16
Panel 10	-0.09	-0.11	0.07	0.19	0.08	0.16	100.29
Latexite Colors - 1000 hours QUV/Condensation							
	ΔL	Δa	Δb	ΔC	ΔH	ΔE	% Strength
Panel 1	0.06	-0.14	0.05	0.14	0.04	0.16	99.78
Panel 2	0.12	-0.07	-0.01	0.06	0.05	0.14	99.24
Panel 3	0.12	0.02	-0.06	-0.06	0.04	0.13	99.04
Panel 4	0.17	0	-0.01	0	0.01	0.17	98.81
Panel 5	0.04	-0.07	0.03	0.07	0.01	0.09	99.8
Panel 6	0.01	-0.1	0.07	0.12	-0.01	0.12	100.14
Panel 7	0.35	0.17	-0.1	-0.19	-0.02	0.4	97.25
Panel 8	-0.02	-0.14	0.05	0.14	0.04	0.15	100.4
Panel 9	-0.03	-0.08	0.01	0.07	0.03	0.08	100.35
Panel 10	-0.16	-0.19	0.08	0.21	0.04	0.27	101.54
Latexite Colors - 1500 hours QUV/Condensation							
	ΔL	Δa	Δb	ΔC	ΔH	ΔE	% Strength
Panel 1	-0.02	-0.21	0.12	0.24	0.02	0.24	100.54
Panel 2	0.05	-0.13	0.06	0.13	0.02	0.15	99.85
Panel 3	0.02	-0.06	0.06	0.08	-0.02	0.09	100.04
Panel 4	0.07	-0.1	0.05	0.11	0.01	0.13	99.68
Panel 5	0	-0.11	0.09	0.14	-0.01	0.14	100.26
Panel 6	0.01	-0.12	0.11	0.15	-0.02	0.16	100.26
Panel 7	-0.01	-0.04	0.03	0.05	0	0.05	100.19
Panel 8	0.01	-0.15	0.08	0.17	0.02	0.17	100.26
Panel 9	-0.09	-0.18	0.1	0.21	0.02	0.23	100.99
Panel 10	-0.16	-0.18	0.13	0.22	-0.01	0.27	101.52
Latexite Colors - 1750 hours QUV/Condensation							
	ΔL	Δa	Δb	ΔC	ΔH	ΔE	% Strength
Panel 1	-0.15	-0.01	-0.05	-0.02	0.05	0.16	101.03
Panel 2	-0.06	-0.08	0.60	0.10	0.00	0.11	100.54
Panel 3	0.03	-0.08	0.05	0.10	0.00	0.10	99.94
Panel 4	0.04	-0.18	0.15	0.23	-0.03	0.24	100.03
Panel 5	-0.07	-0.23	0.17	0.29	-0.01	0.30	100.91
Panel 6	0.09	-0.16	0.12	0.20	-0.01	0.22	99.63
Panel 7	-0.06	-0.16	0.11	0.19	0.00	0.20	100.66
Panel 8	0.07	-0.27	0.16	0.32	0.02	0.33	99.96
Panel 9	-0.06	-0.21	0.17	0.26	-0.03	0.27	100.78
Panel 10	-0.11	-0.34	0.21	0.40	0.01	0.42	101.44
Latexite Colors - 2000 hours QUV/Condensation							
	ΔL	Δa	Δb	ΔC	ΔH	ΔE	% Strength
Panel 1	-0.02	0.09	-0.06	-0.11	0.00	0.11	100.00
Panel 2	0.04	0.03	0.03	-0.01	-0.04	0.06	99.70
Panel 3	0.09	0.02	0.04	0.01	-0.05	0.10	99.34
Panel 4	0.11	-0.10	0.13	0.15	-0.05	0.20	99.45
Panel 5	-0.04	-0.15	0.15	0.20	-0.04	0.21	100.58
Panel 6	0.01	-0.12	0.12	0.16	-0.03	0.17	100.22
Panel 7	0.04	-0.03	0.07	0.07	-0.04	0.09	99.80
Panel 8	0.07	-0.18	0.14	0.23	-0.02	0.24	99.86
Panel 9	-0.02	-0.09	0.10	0.13	-0.03	0.14	100.33
Panel 10	-0.02	-0.16	0.17	0.22	-0.05	0.23	100.51