



273 Industrial Dr. ♦ Hillsdale, MI 49242 ♦ Phone: (517) 439-1485 ♦ Fax: (517) 439-1652

J&L Specialty Steel Incorporated

1200 Midland Avenue
Midland, PA 15059

ATTN: Brett Christman

Accelerated Exposure of Automotive Exterior Materials
Customer Supplied Panels

ACT Quote Number: AQT 41551
ACT Project Number: AIN 136265

Prepared By: SED and JHC
Date Prepared: 05/13/03
Logbook: SED-7; p. 80

APPROVED BY:

A handwritten signature in black ink, which appears to read "Kevin Wendt", is written over a faint, pink, stylized "ACT" logo.

(For) Kevin Wendt
Technical Manager



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LABORATORY TEST REPORT

ACT PROJECT AIN136265

Evaluation #1: Colorfastness
AQT 41551: Per Line Item #11 of Quotation
Material Received: 03/12/03
Test Start Date: 03/18/03
Test End Date: 05/12/03

Test Method: SAE J1960 (11/01)

Exposure: 1317.3 kJ/m² (1008 Hours)

Xenon Chamber: Atlas CI65 (ACT #241)

Serial Number: CB2421

Spectral Irradiance: 0.55 ± 0.01 W/m² at 340 nm
kJ/m²: Kilojoules per meter squared
W/m²: Watts per meter squared
Nm: Nanometer

Evaluations: Initial and final calculated color difference per Evaluation #2

Evaluation #2: Calculated Color Difference
AQT 41551: Per Line Item #13 of Quotation
Material Received: 03/12/03
Test Start Date: 03/18/03
Test End Date: 05/12/03

Test Method: SAE J1545 (06/86)

Formula: CIELAB

Illuminant: Type D65

Instrument Geometry: Integrated sphere

Degree Observer: 10 Degree



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LABORATORY TEST REPORT

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Specular Component: Included

UV Component: Included

Color Parameters: L*: Dark/Light Difference
 a*: Red/Green Difference
 b*: Yellow/Blue Difference

Delta E*: Total difference between two colors as determined by the square root of the sum of the squares of deltas L*, a*, b*

Colorfastness Test Data: **1317.3 kJ/m² per SAE J1960, 0.55 W/m² at 340 nm**

ID	Parameter	Initial	Final	Change	Delta E*
RR 720	L*	26.61	27.40	0.78	1.08
	a*	-0.05	-0.24	-0.19	
	b*	-0.86	-1.58	-0.72	
RR 721	L*	26.90	27.95	1.05	1.32
	a*	-0.10	-0.27	-0.17	
	b*	-0.98	-1.76	-0.77	
RR 722	L*	26.34	27.26	0.91	1.24
	a*	-0.03	-0.23	-0.19	
	b*	-0.78	-1.61	-0.82	
RR 723	L*	26.50	27.11	0.61	0.95
	a*	-0.09	-0.21	-0.12	
	b*	-0.86	-1.58	-0.72	
RR 724	L*	26.28	26.92	0.64	0.92
	a*	-0.04	-0.21	-0.17	
	b*	-0.80	-1.43	-0.63	
RR 725	L*	26.48	27.35	0.87	1.15
	a*	-0.05	-0.22	-0.17	
	b*	-0.90	-1.64	-0.73	

**LABORATORY TEST REPORT****ACT PROJECT AIN136265**Colorfastness Test Data (Cont.): **1317.3 kJ/m² per SAE J1960, 0.55 W/m² at 340 nm**

ID	Parameter	Initial	Final	Change	Delta E*
RR 726	L*	26.26	26.79	0.53	0.90
	a*	-0.02	-0.22	-0.19	
	b*	-0.83	-1.53	-0.70	
RR 727	L*	26.68	27.78	0.80	1.10
	a*	-0.06	-0.23	-0.16	
	b*	-0.91	-1.64	-0.73	
RR 728	L*	26.21	26.80	0.58	0.87
	a*	-0.03	-0.21	-0.18	
	b*	-0.80	-1.43	-0.63	
RR 729	L*	26.35	27.47	1.11	1.38
	a*	-0.04	-0.23	-0.19	
	b*	-0.87	-1.67	-0.79	