

Certificate of Analysis

September 17, 2012

Report For: Hi-Lite Markings, Inc.
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Attn: Brad Dunn

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Sample ID: Costa Rica Airport Samples 9 Locations	Project #: HILT 04-02-01/09
Sample Date: Control Cores Received: 7/3/12 Treated Cores Received: 8/31/12	Type: Top 3/8" of Cores

OBJECTIVE: Evaluate pavement performance in accordance with the FAA P-632 Table 2 Bituminous Pavement Rejuvenation specifications.

DATA/RESULTS:

Location	Sample Type	Costa Rica Airport Rejuva Seal Project		
		AASHTO T 315		
		DSR Viscosity, $\eta = G^* / \omega$, Poise	Complex Modulus, G^* , Pa	Phase Angle, δ , °
Recovered Binder				
1	Control	482,200	48,220	65.32
	Treated	60,270	6,027	80.83
	% Difference	-87.5	-87.5	24
2	Control	835,400	83,540	64.13
	Treated	236,200	23,620	73.59
	% Difference	-71.7	-71.7	15
3	Control	1,273,000	127,300	62.84
	Treated	48,660	4,866	81.50
	% Difference	-96.2	-96.2	30
4	Control	1,112,000	111,200	64.56
	Treated	270,000	27,000	73.26
	% Difference	-75.7	-75.7	13
5	Control	1,086,000	108,600	62.75
	Treated	211,300	21,130	73.85
	% Difference	-80.5	-80.5	18
6	Control	1,330,000	133,000	62.98
	Treated	124,800	12,480	77.69
	% Difference	-90.6	-90.6	23
7	Control	1,003,000	100,300	63.18
	Treated	226,200	22,620	73.00
	% Difference	-77.4	-77.4	16
8	Control	1,011,000	101,100	62.39
	Treated	249,800	24,980	72.34
	% Difference	-75.3	-75.3	16
9	Control	526,600	52,660	66.05
	Treated	167,900	16,790	73.36
	% Difference	-68.1	-68.1	11

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PRI's Accreditations: AASHTO/AAP: an ISO/IEC 17025 Lab

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CONCLUSION: All locations passed the FAA P-632 AASHTO T 315 section stating samples must be reduced by at least 40% of the control Viscosity.

PROCEDURE: All cores were saw-cut removing the top 3/8" layer of the core. The material was broken up and extracted using method ASTM D 2172 (Method A) with toluene and ASTM D 5404 to recover the binder. Complex Modulus, Viscosity, and Phase Angle were tested by AASHTO T 315. In order to limit the amount of coring on site Absolute Viscosity ASTM D 2171 was not performed. All results are listed in the table above.

Tested by: 
Jimmy Ynigues, Pavement Technician

Date: September 17, 2012

Reviewed by: 
Matt Groh E.I.T., Pavement Services Manager

Date: September 17, 2012