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SERVICES, INC.

Report No.: J-123456
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P.O. No.: PO1234-5

ASTM E595 Analysis
Laboratory Report

Prepared for:
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Your Company Name
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Introduction

This report summarizes the analysis of one sample submitted by XXX of *Your Company*. The sample consisted of cured epoxy on a clean glass substrate, which was to be tested per ASTM E595 for Total Mass Loss (TML) and Collected Volatile Condensable Materials (CVCM). Pass/Fail criteria have been set at 1.0% TML and 0.1% CVCM per method recommendations and per client request.

Sample Information
Sample type: 2-part epoxy
Manufacturer: Best Epoxy Company
Part Number: Epoxy#3
Lot: 012345
DC: 0124
Number of pieces: 2
Cure Profile: 24hours @ 100°C

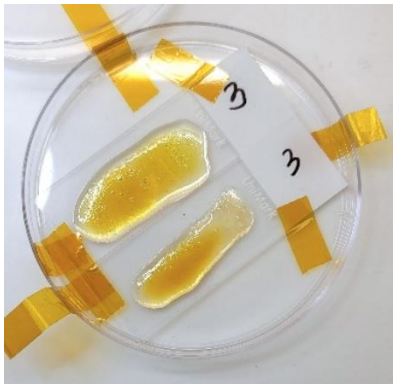

Figure 1: Optical image of sample as received.

Results – Pass/Fail

Sample	%TML	Average % TML	%CVCM	Average %CVCM
Rep #1	0.09		0.00	
Rep #2	0.10	**0.10**	0.00	**0.00**
Rep #3	0.10	**Pass**	0.00	**Pass**

Sample Preparation

Samples were removed from the substrate with a clean stainless steel razor blade. Per method requirements, samples were cut/broken into pieces roughly 1-3 mm in size, using a clean pair of cutting dikes, then placed in an aluminum weigh boat. Roughly 100-300 mg of pieces were transferred into pre-weighed ultra-high vacuum aluminum test boats. Two empty boats were prepared as Blanks and one boat was prepared using a previously tested polyimide reference sample. All samples were prepared in a Class 5 laminar flow cabinet with ULPA filter.

The boats with samples were placed in a clean aluminum tray, which was then placed in a thermal humidity chamber to be pre-conditioned at 23ºC/50% RH for 24 hours.

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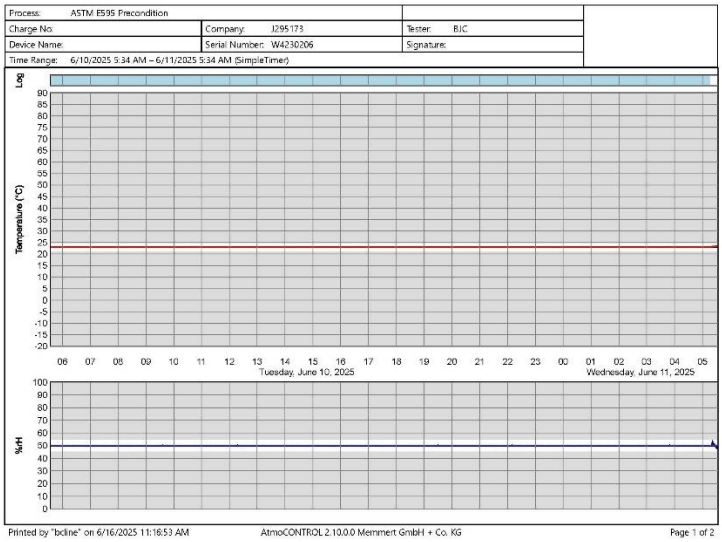
Figure 2: Optical image of sample broken into pieces for testing.



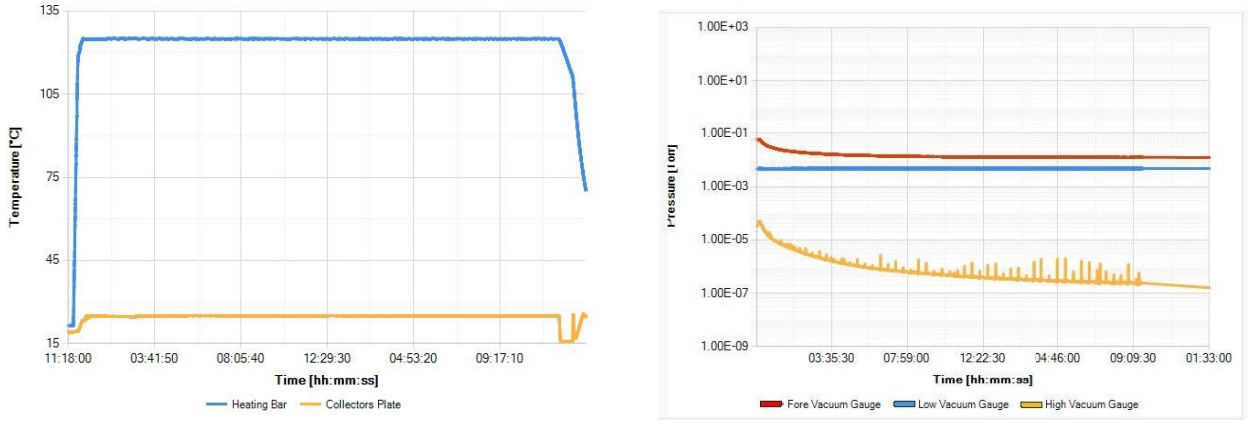
Figures 3 & 4: Temperature and Humidity chart indicating no anomalies during preconditioning (left) and Optical image of Replicate #1 in sample test boat after preconditioning (right).

Figure 5: Optical image of collector plates prior to testing

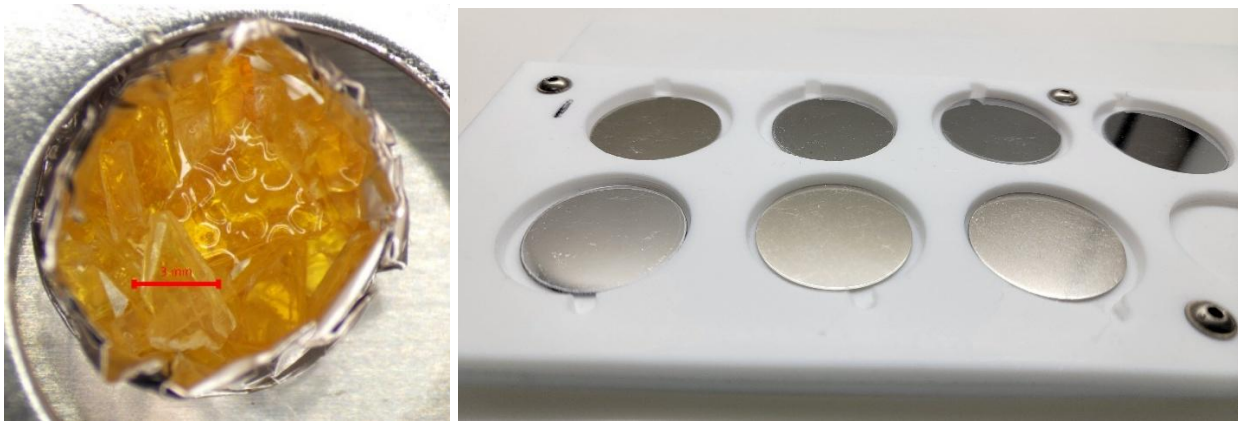
Analytical Conditions

After pre-conditioning, samples with boats were weighed on a microbalance accurate to 1 µg and then placed in a vacuum environment at < $5X10^{-5}$ torr, and heated to 125°C (+/-1) for 24 hours. Samples were positioned opposite collector plates held at 25°C (+/-1). Analysis time began once all three variable setpoints had been reached. Test time was set for 24.0 hours.

Charting and data recording features of the instrumentation and software indicated no significant anomalies during testing.



Figures 7 & 8: Temperature and vacuum charts for sample heating bar and collector plates (left) and vacuum gauges (right) during testing. Spikes on high vac chart are electronic noise.



Figures 9 & 10: Optical image of Replicate #3 pieces after testing (left) and Collector Plates after testing (right).

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ASTM E595

Job #(s) J-123456

Tested By: BJC/MEW

Precondition Date/Time In:6/10@0534 Out: 6/11@0535 Test Date/Time Start:6/11@1145 End:6/12@1145

Balance auto-cal Precond X Balance auto-cal Init X Chiller H2O checkX Balance auto-cal FinalX

Sample Cup	Sample ID	Collector Mass (i)	Collector Mass (f)	Cup Mass	Sample + Cup	Sample Mass	Final Mass (sample + Cup)	Δ Mass Sample	Δ Mass Collector
1	J-123455-1 #1	5.822185	5.822174	0.063936	0.353438	0.289502	0.353188	0.000250	-0.000011
2	J-123455-1 #2	5.826483	5.826476	0.063961	0.355116	0.291155	0.354940	0.000176	-0.000007
3	J-123455-1 #3	5.899530	5.899533	0.065165	0.355160	0.289995	0.354880	0.000280	0.000003
4	Blank	4.223547	4.222978	0.063701	0.063700	-0.000001	0.063704	-0.000004	-0.000569
5	Ref 6502	5.828148	5.828892	0.063191	0.356241	0.293050	0.354662	0.001579	0.000744
6	Blank	4.240456	4.240508	0.063823	0.063822	-0.000001	0.063825	-0.000003	0.000052
7	J-123456-1 #1	5.791781	5.791785	0.064994	0.347651	0.282657	0.347402	0.000249	0.000004
8	J-123456-1 #2	5.818117	5.818119	0.064013	0.281962	0.217949	0.281753	0.000209	0.000002
9	J-123456-1 #3	5.811688	5.811694	0.063853	0.345564	0.281711	0.345274	0.000290	0.000006

Sample Cup	Sample ID	TML (%)	AVG TML	CVCM (%)	AVG CVCM	TV (TML)	% Rec TML	TV(CVCM)	% Rec CVCM
1	J-123455-1 #1	0.09	0.08	0.00	0.00				
2	J-123455-1 #2	0.06		0.00					
3	J-123455-1 #3	0.10		0.00					
4	Blank	< 20 ug		<20 ug		0.60	90%	0.15	169%
5	Ref 6502	0.54		0.25					
6	Blank	<20 ug		<20 ug					
7	J-123456-1 #1	0.09	0.10	0.00	0.00				
8	J-123456-1 #2	0.10		0.00					
9	J-123456-1 #3	0.10		0.00					

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