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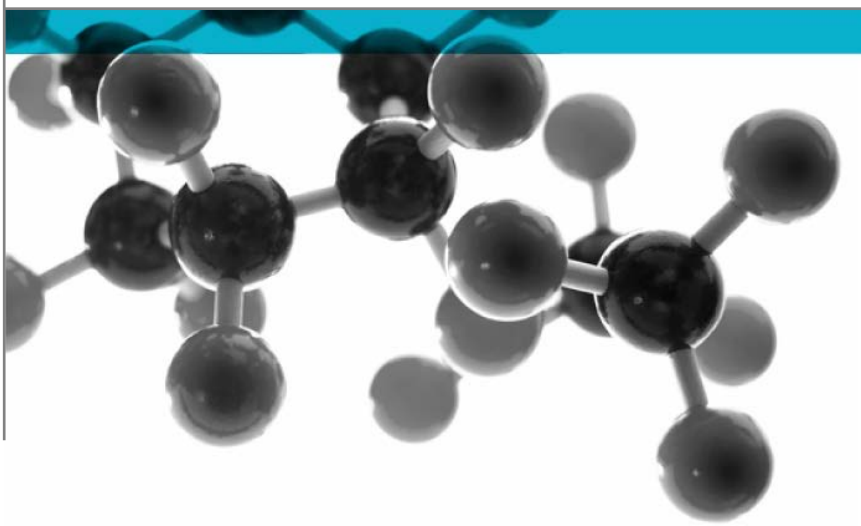
ASTM E595-15 Outgas Testing
Clear Silicone Slab; SSP2390-60D; Conditioned 3/200



Report prepared for:

Specialty Silicone Products, Inc.
Attn: Dominic Testo
3 McCrea Hill Road
Ballston Spa, NY 12020

Phone: (518) 363-5034
Fax: N/A
Email: dtesto@sspinc.com

Issue Date: December 9, 2015
Original Due Date: December 10, 2015
Revision Letter:
Date Revised:

Exova OCM Report No: **351714**
Exova OCM Quote No: 15-240-1860
Purchase Order No: 0022253

Accredited Nadcap™
Non Metallic Materials

Testing
Advising
Assuring

LABORATORY ACCREDITATION BUREAU ACCREDITED
Certificate # L2195 Testing
ISO/IEC 17025

Revision History

Revision Letter:	Original Issue	Issue Date:	December 9, 2015
Prepared By:	R. Miller	Approved By:	See below

Revision Letter:		Re - Issue Date:	
Revised By:		Approved By:	
Reason for Revision:			

Report Signatories and Approval

This is to certify that the above tests were performed in accordance with the terms of the purchase order requirements.
Test equipment is calibrated with standards traceable to the NIST.

Approval Signature: **Gerry Minogue** **Supervisor** **Chemical Laboratory**	***(Signed for and on behalf of Exova-OCM)***  

Approval Signature: **Thomas J. (Tom) Parsons** **Manager** **Quality / Technical Services**	***(Signed for and on behalf of Exova-OCM)***  

This test report shall not be reproduced except in full, without the written approval of Exova-OCM. The laboratory has tested the material / items supplied by the client as sampled in accordance with the client's requirements. The recording of false, factious or fraudulent statements or entries on the test report may be punished as a felony under federal law. Tests so marked (*) are not included in the L-A-B and/or Nadcap schedule of accreditation of this laboratory.

Introduction

On November 20, 2015, Exova OCM received for testing: one (1) sample (s) consisting of one (1) transparent silicone slab materials. Paperwork received included P.O. 0022253. The purchase order references Exova OCM quote No. 14-240-1860. There was no indicated PO due date. The date received plus lead time yielded a due date of December 10, 2015.

Receiving inspection was performed on November 24, 2015, and no discrepancies were noted.

Testing was performed in accordance with the aforementioned P.O. and Exova OCM Quote No. 15-240-1860.

SPECIFICATION: Customer requirement TML of 1.00 % and CVCM of 0.10 %

Note: ASTM E595-15 para. 1.5: The criteria used for the acceptance and rejection of materials shall be determined by the user and based upon specific component and system requirements. Historically, TML of 1.00 % and CVCM of 0.10 % have been used as screening levels for rejection of spacecraft materials.

MATERIAL/SAMPLE IDENTIFICATION:

Sample No.	Description	Markings
1	One (1) Slab of Silicone Product: SSP2390-60D	SSP2390-60D Conditioned 3/200

REQUIRED TESTING:

Item No. per P.O.	Sample No.	Quantity	Test Description	Test Method
1	1	3	Outgassing Test	ASTM E595-15

Summary of Results

Sample No.	Determination	Test Values	Requirements	Results
1	Total Mass Loss (% TML)	0.050	1.00 (max)	Complies
1	Collected Volatile Condensable Materials (% CVCM)	0.004	0.10 (max)	Complies
1	Water Vapor Regain (% WVR)	0.041	Not specified	Information Only

Conclusion

The above customer supplied material meets customer requirements for the testing performed. Percent total mass loss (%TML) and percent collected volatile condensable materials (%CVCM) are within the accepted range.

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ASTM E595-15 Outgas Testing

Type of Test:	Determination of TML, CVCM and WVR From Thermal Outgassing
Material Identification:	1) Clear Silicone Slab
Part No. / Lot / Batch / Serial No.:	SSP2390-60D; Conditioned 3/200
Specification:	ASTM E595-15
Test Procedure:	ASTM E595-15
Specimen Conditions:	Pre Condition: 73F / 50% RH (24 hours) Post Condition: 73F / 50% RH (24 Hours)
Test Parameters:	Outgas 24 Hours @ +257 +/-2F under vacuum of 5 x 10^{-5} or less Torr
Test Performed By:	Ryan Miller *Date of Test:* 12/06/15 – 12/09/15

TEST DATA:

Test No.	***1***	***2***	***3***	***Blank***		
Compartment No.	***1***	***2***	***3***	***4***		
"Initial" Collector Mass (mg)	2582.031	2021.107	1612.650	1939.277		
"Initial" Boat Mass (mg)	231.404	240.415	233.620			
"Initial" Boat+Specimen Mass (mg)	457.527	479.182	446.777			
"Conditioned" (73°F / 50% RH / Minimum of 24 Hrs) Boat+Specimen Mass (mg)	457.553	479.213	446.806			
"Post Outgassing" (Cooled to RT in Desiccator) Boat+Specimen Mass (mg)	457.441	479.087	446.707			
"Post Outgassing" (Cooled to RT in Desiccator) Collector Mass (mg)	2582.039	2021.116	1612.660	1939.277		
WVR "Post Conditioned" (73°F / 50% RH / 24 Hrs) Boat+Specimen Mass (mg)	457.531	479.192	446.790			
					Average	***Limits***
Total Mass Loss (% TML)	0.050	0.053	0.046		**0.050**	**1.00%**
Collected Volatile Condensable Materials (% CVCM)	0.004	0.004	0.005		**0.004**	**0.10%**
Water Vapor Regain (% WVR)	0.040	0.044	0.039		0.041	Report

The above sample meets customer requirements for the above test.

EQUIPMENT USED:

Equipment	Size / Type	Control Number	Calibration Due
Microbalance:	Sartorius	1210	10-08-16
Vacuum Outgassing Unit:	Varian 3118	1481	N/A
Ionization Gauge Controller:	CHA Industries	2853	07-30-16
Temperature Controller:	Watlow	1164	04-17-16

END OF REPORT