



CONSTRUCTION MATERIALS

TECHNOLOGIES

LABORATORY TEST RESULTS

Report for: Dow Silicones Corporation
2200 W. Salzburg Rd.
Midland, MI 48686

Attention: Kelly Allore

Product Name(s): DOWSIL™ 983 SGS	Manufacturer: Dow Silicones Corporation
PRI-CMT Project No.: DCCO-045-02-02	Source: See Sampling Section
Date Received: See Sampling Section	Dates Tested: June 6, 2015 – January 27, 2016

Purpose: Determine specification properties for *The Dow Silicones Corporation's DOWSIL™ 983 Structural Glazing Sealant* for compliance with ASTM C 1184: *Standard Specification for Structural Silicone Sealants*. DOWSIL™ 983 is a two-part, neutral-cure, RTV silicone sealant. Samples for testing were witnessed at a the point of manufacture and dispensed through an airless mixing system in accordance with manufacturer's published instructions.

Test Methods: Testing was completed as described in ASTM C 1184-13: *Standard Specification for Structural Silicone Sealants*. Test methods assigned or referenced include ASTM C 603; *Standard Test Method for Extrusion Rate and Application Life of Elastomeric Sealants*, ASTM C 639: *Standard Test Method for Rheological (Flow) Properties of Elastomeric Sealants*, ASTM C 661: *Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer*, ASTM C 679: *Standard Test Method for Tack-Free Time of Elastomeric Sealants*, ASTM C 792: *Standard Test Method for Effects of Heat Aging on Weight Loss, Cracking, and Chalking of Elastomeric Sealants*, ASTM C 1135: *Standard Test Method for Determining Tensile Adhesion Properties of Structural Sealant*, ASTM C 1442: *Standard Practice for Conducting Tests on Sealants Using Artificial Weathering Apparatus*.

Sampling: The following materials were received by PRI.

Product	Source	Date
DOWSIL™ 983 SGS	Midland, MI	June 1, 2015

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Results of Testing:

Property	Test Method	Result	Requirement
Film Physical Property Requirements			
Rheological Properties (in) 1 specimen; Type IV; 3/4" x 1/2" x 6"; Cond. sealant 16h @ 73.4±3.6°F & 50±5%RH; Cond. channel 2h @ Temp; Test Cond. 4h @ Temp	ASTM C 639		
Vertical Slump at 40±3.6°F		1/32	≤ 3/16
Vertical Slump at 122±3.6°F		1/32	≤ 3/16
Horizontal Slump at 40±3.6°F		Pass	No deformation
Horizontal Slump at 122±3.6°F		Pass	No deformation
Extrudability (s) 1 specimen; Cond. sealant 16h @ 73.4±3.6°F & 50±5%RH; Test Cond. @ 73.4±3.6°F & 50±5%RH Curing period 30 minutes Test with no nozzle @ 50psi	ASTM C 603		
Extrusion Rate		1.5	≤ 10
Hardness (Shore A) 3 specimens; 5" x 1-1/2" x 1/4"; 2 measurement readings per specimen (6 total); Cond. 14d @ 73.4±3.6°F & 50±5%RH; Test Cond. 73.4±3.6°F & 50±10%RH; Test Durometer, Type A-2	ASTM C 661		
Indentation Hardness		40	20-60
Effects of Heat Aging 3 specimens; 5" x 1-1/2" x 1/4"; Cure 7d @ 73.4±3.6°F & 50±5%RH; Cond. 21d @ 190±10°F	ASTM C 792		
Weight Loss(%)		1.6	≤ 10
Visual examination for presence of cracks or chalking		Pass	No cracking or chalking
Tack-Free Time [Pass/Fail] 2 specimens; 3-3/4" x 1" x 1/8"; Test Cond. 73.4±3.6°F & 50±5%RH	ASTM C 679	Pass	No transfer in 3h
Tack-Free Time (h)		0.5	Report
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Property	Test Method	Result	Requirement
Tensile Adhesion on glass and aluminum (hybrid) (psi) 5 specimens per condition; 3/8" x 1/2" x 2"; Cure 21d @ 73.4±3.6°F and 50±5%RH; Rate 1/2"/min Condition as follows:	ASTM C 1184		
Standard conditions		143	≥ 50
Test Cond. 1h @ 88±5°C		112	≥ 50
Test Cond. 1h @ -29±2°C		205	≥ 50
Test Cond. 7d immersed in DI water @ 23±2°C		137	≥ 50
Test Cond. 5,000h UV/Con	ASTM C 1442 Sec. 7.3	145	≥ 50

Notes: None

Statement of Compliance: The product tested complies with the requirements of ASTM C 1184: *Standard Specification for Structural Silicone Sealants* as described herein. The laboratory test results presented in this report are representative of the material supplied.

Signed: 
 Jason Simmons
 Director

Date: July 19, 2018

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	2/09/2016	3	NA
Revision	2/09/2016	3	Editorial
Revision	7/20/2018	3	Editorial – manufacturer's company and product id update

END OF REPORT

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