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DOW SILICONES CORPORATION
TEST REPORT

SCOPE OF WORK
ASTM C719 CYCLIC MOVEMENT AT 35% EVALUATION OF DOWSIL™ CONTRACTOR'S WEATHERPROOFING SEALANT FOR SWRI SEALANT VALIDATION PROGRAM COMPLIANCE

REPORT NUMBER
L5242.01-106-31 R0

TEST DATE(S)
10/22/20 - 12/11/20

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01/26/21

RECORD RETENTION END DATE
12/11/25

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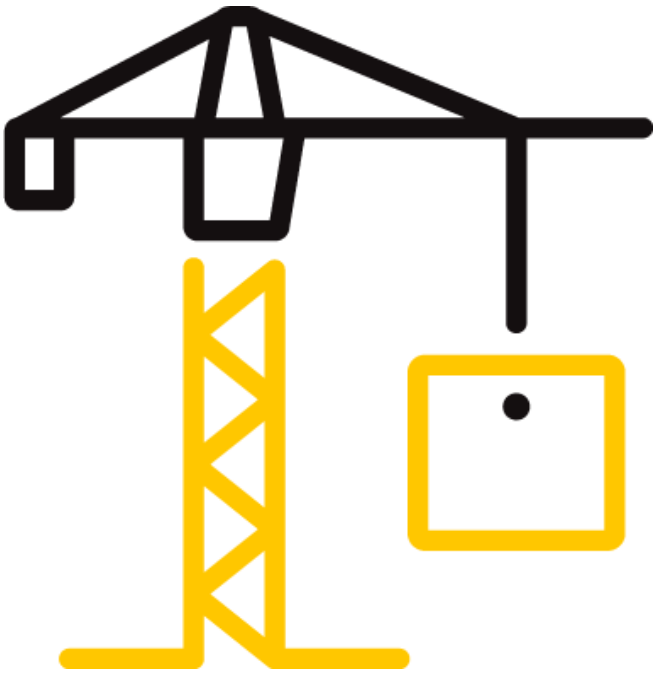

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TEST REPORT FOR DOW SILICONES CORPORATION
Report No.: L5242.01-106-31 R0
Date: 01/26/21

REPORT ISSUED TO

DOW SILICONES CORPORATION
2200 West Salzburg Road
Auburn, Michigan 48611

SECTION 1

SCOPE

Product: DOWSIL™ Contractor's Weatherproofing Sealant

Intertek Building & Construction (B&C) was contracted by Dow Silicones Corporation to evaluate DOWSIL™ Contractor's Weatherproofing Sealant in accordance with ASTM C719 for Adhesion and Cohesion. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at the Intertek B&C test facility in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

For INTERTEK B&C:

COMPLETED BY:	Joshua A. Kennedy	**REVIEWED BY:**	Dawn M. Chaney
TITLE:	Technician III Materials Laboratory	**TITLE:**	Technician Team Lead Materials Laboratory
SIGNATURE:	Joshua A Kennedy Digitally Signed by: Joshua Kennedy	**SIGNATURE:**	Dawn M. Chaney Digitally Signed by: Dawn M. Chaney
DATE:	01/26/21	**DATE:**	01/26/21

JAK:dmc/als

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SECTION 2
SUMMARY OF TEST RESULTS

SUBSTRATE	CLASS	STEP FAILURE	FAILURE TYPE
Mortar	35	None	None
Glass	35	None	None
Aluminum	35	None	None

SECTION 3
TEST METHOD

The specimens were evaluated in accordance with the following:

> **ASTM C719-14 (Reapproved 2019)**, *Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle)*

SECTION 4
MATERIAL SOURCE

The DOWSIL™ Contractor's Weatherproofing Sealant and DOWSIL™ Construction Primer P materials were purchased by Intertek B&C personnel, and the following were received in acceptable condition on 10/20/2020:

- Twelve 10.3-oz tubes of limestone color DOWSIL™ Contractor's Weatherproofing Sealant, Batch H050K56040
- One pint of clear DOWSIL™ Construction Primer P, Batch YY00K48MLV

Refer to the product description photos in Section 10. The material was tested as received with the exception of applying to substrate and fully curing. Representative materials/test specimen(s) will be retained by Intertek B&C for a minimum of five years from the test completion date.

SECTION 5
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Joshua A. Kennedy	Intertek B&C
Dawn M. Chaney	Intertek B&C

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SECTION 6
TEST PROCEDURE

All conditioning of test specimens and test conditions were at standard laboratory conditions unless otherwise reported. Refer to the test related photos in Section 10. Calibration certificates available upon request.

ASTM C719, Adhesion and Cohesion
The cyclic movement capabilities of the sealant were determined utilizing three specimens each for mortar, glass, and aluminum substrates that were prepared by filing a 0.5-inch wide by 0.5-inch deep by 2.0-inch long spacer with the DOWSIL™ Contractor's Waterproofing Sealant. The mortar substrate was primed with DOWSIL™ Construction Primer P.

All test specimens cured for 21 days as follows: seven days at 73°F and 50% R.H. in an ESPEC environmental chamber (ICN: INT00658), seven days at 100°F and 95% R.H. in a humidity chamber (ICN: 005987), and seven days at 73°F and 50% R.H in the ESPEC chamber. The cured specimens were immersed for 7 days in water at 70°F, then hand-flexed twice to 60° to check the bond. Specimens were compressed to 0.325 inches and exposed to 158°F air in an oven (ICN: 005318) for 7 days. Within 24 hours uncompressed at 70°F, the specimens were exposed to 10 ambient condition cycles utilizing a Series 500 Horizontal Sealant Tester (ICN: 005886): compress the specimens to 35% and then extend the specimens to 35% at a rate of 0.125 in/hour.

The test specimens were then subjected to ten cycles of the following hot compression-cold extension cycle: compress 35% and place in an oven at 158 ±3.6°F (70 ±2°C) for 16 to 20 hours; cool uncompressed to room temperature for two to three hours; extend to the 35% extension position starting from the 35% compression position utilizing the Series 500 Horizontal Sealant Tester at a rate of 0.125-inch per hour while maintained at -15 ±3°F (-26.1 ±1.7°C); and then warm to room temperature for two hours at 35% extension. At the completion of the compression-extension cycles, the specimens were observed for adhesive/cohesive failure to the substrates.

SECTION 7
TEST SPECIMEN DESCRIPTIONS

TEST PROCEDURE	NUMBER OF SPECIMENS	NOMINAL SPECIMEN DIMENSIONS	VISUAL CHARACTERISTICS
ASTM C719	3, Mortar	2.0 x 0.5 x 0.5 inch	Limestone
ASTM C719	3, Glass	2.0 x 0.5 x 0.5 inch	Limestone
ASTM C719	3, Aluminum	2.0 x 0.5 x 0.5 inch	Limestone

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SECTION 8
TEST RESULTS

ASTM C719, Mortar Blocks

PROCEDURE STEP	SPECIMEN		
	1	2	3
60° Flex	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
70°C Compression	Sealant slightly hardened	Sealant slightly hardened	Sealant slightly hardened
10 Room Temperature Cycles	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
10 Hot-Compression, Cold-Extension	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
Adhesion Failure	0%	0%	0%
Cohesion Failure	0%	0%	0%

ASTM C719, Glass Blocks

PROCEDURE STEP	SPECIMEN		
	1	2	3
60° Flex	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
70°C Compression	Sealant slightly hardened	Sealant slightly hardened	Sealant slightly hardened
10 Room Temperature Cycles	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
10 Hot-Compression, Cold-Extension	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
Adhesion Failure	0%	0%	0%
Cohesion Failure	0%	0%	0%

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ASTM C719, Aluminum Blocks

PROCEDURE STEP	SPECIMEN		
	1	2	3
60° Flex	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
70°C Compression	Sealant slightly hardened	Sealant slightly hardened	Sealant slightly hardened
10 Room Temperature Cycles	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
10 Hot-Compression, Cold-Extension	No visible deleterious effects	No visible deleterious effects	No visible deleterious effects
Adhesion Failure	0%	0%	0%
Cohesion Failure	0%	0%	0%

SECTION 9
CONCLUSION

The DOWSIL™ Contractor's Waterproofing Sealant product met the specified performance requirements of ASTM C719 for mortar, glass, and aluminum substrates for the SWRI Sealant Validation Program.

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SECTION 10
PHOTOGRAPHS

Photo No. 1
Sealant, As Received

Photo No. 2
Primer, As Received

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Photo No. 3
Typical Mortar Specimen Detail

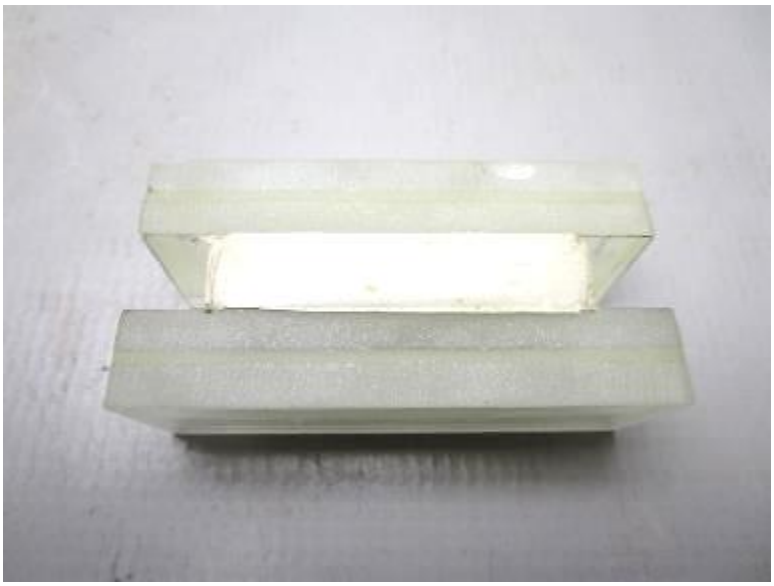

Photo No. 4
Typical Glass Specimen Detail

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Photo No. 5
Typical Aluminum Specimen Detail

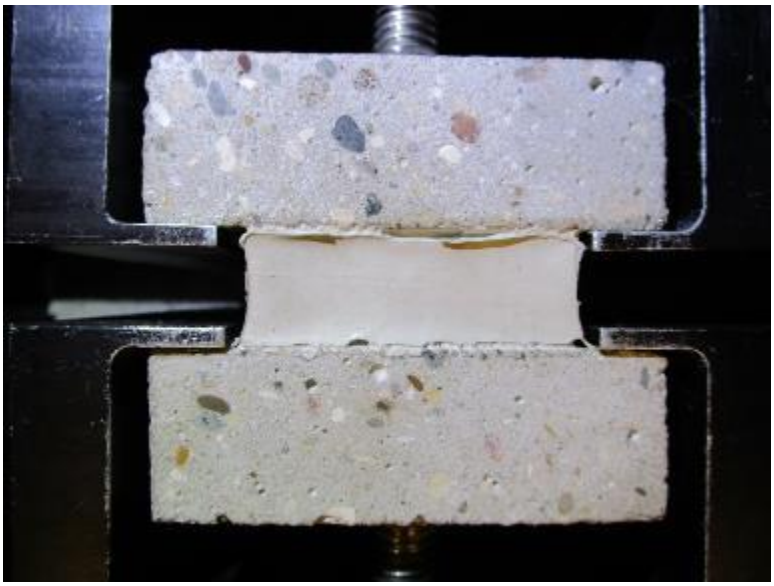

Photo No. 6
Typical Mortar Post-Cycling Extended Specimen Detail

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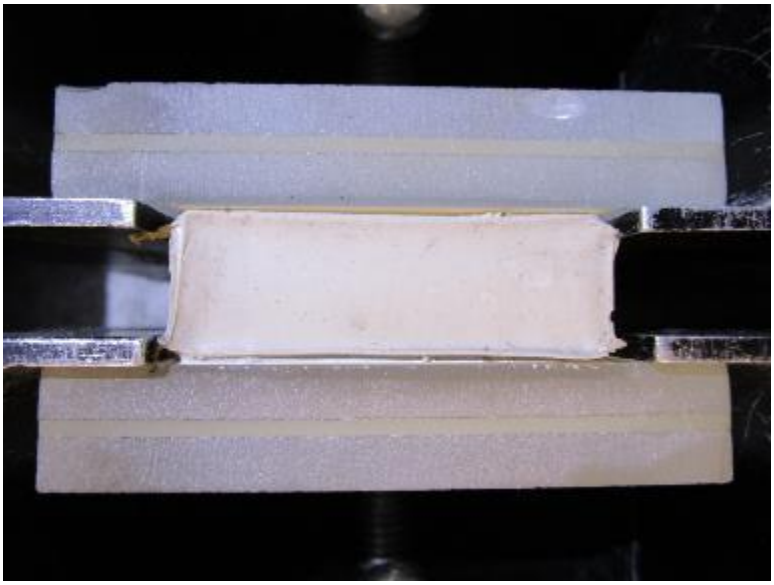

Photo No. 7
Typical Glass Post-Cycling Extended Specimen Detail

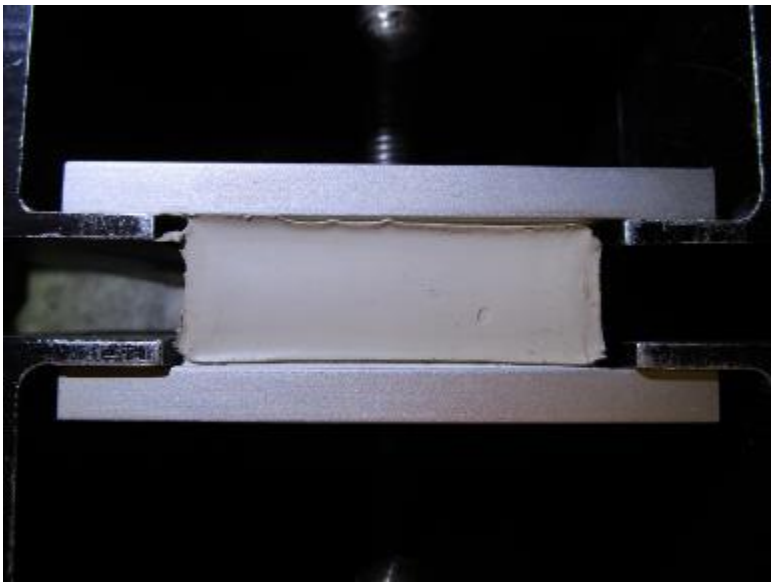

Photo No. 8
Typical Aluminum Post-Cycling Extended Specimen Detail

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SECTION 11
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	01/26/21	N/A	Original Report Issue