



PRI Construction Materials Technologies LLC

6412 Badger Drive

Tampa, FL 33610

813.621.5777

<https://www.pri-group.com/>

Laboratory Test Report

Report for: Errol Bull
Momentive Performance Materials
260 Hudson River Road
Waterford, NY

Product Name: SCS9000 Silpruf NB (Waterford, NY)

Project No.: MPM-134-02-01

Dates Tested: October 22, 2018 – January 2, 2019

Test Methods: ASTM C 920

Results Summary: Compliant: ASTM C 920 – Type S, Grade NS, Class 50, Use G, A

Purpose: Determine specification properties of the identified product for compliance with ASTM C 920: *Standard Specification for Elastomeric Joint Sealants*.

Test Methods: Testing was completed as described in ASTM C 920-11: *Standard Specification for Elastomeric Joint Sealants*. Test methods assigned or referenced include ASTM C 510: *Standard Test Method for Staining and Color Change of Single or Multicomponent Joint 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 719: *Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle)*, ASTM C 793: *Standard Test Method for Effects of Laboratory Accelerated Weathering on Elastomeric Joint Sealants*, ASTM C 794: *Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants*, ASTM C 1183: *Standard Test Method for Extrusion Rate of Elastomeric Sealants* and ASTM C 1246: *Standard Test Method for Effects of Heat Aging on Weight Loss, Cracking, and Chalking of Elastomeric Sealants After Cure*, and ASTM C 1442: *Practice for Conducting Tests on Sealants Using Artificial Weathering*

Sampling: The following materials were received by PRI.

<u>Product</u>	<u>Source</u>	<u>Date</u>	<u>Sampling</u>
SCS9000 Silpruf NB	Waterford, NY	Dec. 14, 2017	Momentive Performance Materials

MPM-134-02-01

The test results, opinions, or interpretations are based on the material supplied by the client. This report is for the exclusive use of stated client. No reproduction or facsimile in any form can be made without the client's permission. This report shall not be reproduced except in full without the written approval of this laboratory. PRI Construction Materials Technologies LLC assumes no responsibility nor makes a performance or warranty statement for this material or products and processes containing this material in connection with this report.

Results:

Property	Test Method	Result ^{1,2}	Requirement
Rheological Properties (in) 1 specimen; 3/4" x 1/2" x 6"; Type II 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		~ 0	≤ 3/16
Vertical Slump at 122±3.6°F		~ 0	≤ 3/16
Horizontal Slump at 40±3.6°F		Pass	No deformation
Horizontal Slump at 122±3.6°F		Pass	No deformation
Extrusion Rate (ml/min) 1 specimen; Cond. sealant 16h @ 73.4±3.6°F & 50±5%RH; Specific Gravity of complete (ASTM D 1475) Test Cond. @ 73.4±3.6°F & 50±5%RH Test with plastic nozzle @ 40psi for 60s	ASTM C 1183 Procedure A		
Specific Gravity	ASTM D 1475	1.4	Report
Extrusion Rate		31.4	≥ 10
Application Life – Type M, Grade P ONLY (mL/min) 1 specimen; Cond. sealant 16h @ 73.4±3.6°F & 50±5%RH; Test Cond. 3h @ 73.4±3.6°F & 50±5%RH Test with plastic nozzle @ 40psi for 60s	ASTM C 1183 Procedure A	NA	
Specific Gravity	ASTM D 1475		Report
Extrusion Rate 5 min after mixing			≥ 10
Hardness (hardness reading) 2 specimens; 5" x 1-1/2" x 1/4"; 3 measurement readings per specimen (6 total); Cond. 21d @ 73.4±3.6°F & 50±5%RH followed by; Test Cond. 73.4±3.6°F & 50±10%RH; Test Durometer, Type A-2	ASTM C 661		
Indentation Hardness		31	< 60

Continued on Following Page

MPM-134-02-01

The test results, opinions, or interpretations are based on the material supplied by the client. This report is for the exclusive use of stated client. No reproduction or facsimile in any form can be made without the client's permission. This report shall not be reproduced except in full without the written approval of this laboratory. PRI Construction Materials Technologies LLC assumes no responsibility nor makes a performance or warranty statement for this material or products and processes containing this material in connection with this report.

Property	Test Method	Result ^{1,2}	Requirement
Effects of Heat Aging (%) 3 specimens; 5" x 1-1/2" x 1/4"; Cure 28d @ 73.4±3.6°F & 50±5%RH; Test Cond. 21d @ 158±3.6°F	ASTM C 1246		
Percent Weight Loss		0.4	≤ 7
Visual Examination for presence of cracks or chalking		Pass	No cracking or chalking
Tack-Free Time (h) 2 specimens; 3-3/4" x 1" x 1/8"; Test Cond. 73.4±3.6°F & 50±5%RH; Test @ 72h	ASTM C 679	0.75	≤ 72
Stain and Color Change [Pass/Fail] 3 specimens; 5" x 1-1/2" x 1/4"; Cond. 24h @ 73.4±3.6°F & 50±5%RH; Test 100h ASTM G 154, Cycle 1 Test 14d at 73.4±3.6°F & 50±5%RH w/ immersion daily	ASTM C 510		
Visual Inspection for stain and color change		Pass	No visible stain or color change
Adhesion and Cohesion Under Cyclic Movement (in ²) 3 specimens; 1/2" x 1/2" x 2": Movement ±50% Cure 21d @ 73.4±3.6°F and 50±5%RH followed by; Test Cond. 7d Water Immersion @ 73.4±3.6°F; Test Cond. 7d Compressed @ 158°F; Test 10 cycles at 73.4±3.6°F; Rate 1/8 in/h; Test 10 cycles with compression at 158±3.6°F followed by extension at -15±3°F; Rate 1/8"/h	ASTM C 719		
Aggregate loss in bond and cohesion Anodized Aluminum substrate primed with SS4044P primer		0	≤ 1-1/2
Aggregate loss in bond and cohesion Glass substrate unprimed		0	≤ 1-1/2
Adhesion-in-Peel (lbf) 4 specimens; 1" x 1/16"; Cure 21d @ 73.4±3.6°F and 50±5%RH followed by; Immersed in distilled water for 7d @ 73.4±3.6°F Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min	ASTM C 794		
Adhesion-in-Peel Anodized Aluminum substrate primed with SS4044P primer	<i>Pre-immersion</i>	30	≥ 5
	<i>Post-immersion</i>	12	
Adhesion-in-Peel Glass substrate unprimed	<i>Pre-immersion</i>	21	≥ 5
	<i>Post-immersion</i>	14	

Continued on Following Page

MPM-134-02-01

The test results, opinions, or interpretations are based on the material supplied by the client. This report is for the exclusive use of stated client. No reproduction or facsimile in any form can be made without the client's permission. This report shall not be reproduced except in full without the written approval of this laboratory. PRI Construction Materials Technologies LLC assumes no responsibility nor makes a performance or warranty statement for this material or products and processes containing this material in connection with this report.

Property	Test Method	Result ^{1,2}	Requirement
Adhesion-in-Peel exposed to UV through glass (lbf) 4 specimens; 1" x 1/16"; Cure 21d @ 73.4±3.6°F and 50±5%RH followed by; Test Cond. 200h ASTM G 154, Cycle 1 Immersed in distilled water for 7d @ 73.4±3.6°F Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min	ASTM C 794/ ASTM C1442		
Adhesion-in-Peel UV through glass unprimed		19	≥ 5
Effects of Accelerated Weathering [<i>Pass/Fail</i>] 3 specimens; 5" x 1-1/2" x 1/4"; Cure 21d @ 73.4±3.6°F and 50±5%RH; Test Cond. 250h ASTM G 154, Cycle 1; Test Cond. 24h @ -15±4°F Test 180° around 1/2" ø mandrel in 1s @ -15°F	ASTM C 793		
Visual Inspection for cracking after accelerated weathering		Pass	Pass
Visual Inspection for cracking after cold exposure and low temperature bend		Pass	Pass

Notes: 1 – NA represents "Not Applicable"
 2 – All specimens for peel adhesion exhibited less than 25% adhesive failure.

Statement of Compliance: The product tested complies with the physical requirements specified in ASTM C 920-11: *Standard Specification for Elastomeric Joint Sealants*. The laboratory test results presented in this report are representative of the material supplied.

Limits of Use: Refer to page 1 results summary for class of movement and for qualified substrates.

Signed:



 Jason Simmons
 Director

Date:

_____ January 2, 2019 _____

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	01/02/2019	4	NA

END OF REPORT

MPM-134-02-01

The test results, opinions, or interpretations are based on the material supplied by the client. This report is for the exclusive use of stated client. No reproduction or facsimile in any form can be made without the client's permission. This report shall not be reproduced except in full without the written approval of this laboratory. PRI Construction Materials Technologies LLC assumes no responsibility nor makes a performance or warranty statement for this material or products and processes containing this material in connection with this report.