



PRI Construction Materials Technologies LLC

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Laboratory Test Report

Report for: Kelly Allore
Dow Silicones Corporation
2200 West Salzburg Road
Midland, Michigan 48686

Product Name: DOWSIL™ 778

Project No.: 2107T0016

Date(s) Tested: Aug. 16, 2021 - Sep. 7, 2021

Test Method(s): AAMA 714

Results Summary: Compliant with:
- AAMA 714-19: Level 3 (176°F), Category I (1/8")

Purpose: Evaluate the performance properties of DOWSIL™ 778 in accordance with AAMA 714: *Voluntary Specification for Liquid Applied Flashing Used to Create a Water-Resistive Seal Around Exterior Wall Openings in Buildings.*

Product is a single component silicone sealant for weatherproofing at window and door openings and other building transitions.

Test Methods: Testing was completed as required in AAMA 714-19: *Voluntary Specification for Liquid Applied Flashing used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings.* Test methods assigned or referenced include AAMA 711-13: *Voluntary Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products*, ASTM C 794-18: *Standard Test Method for Adhesion-in Peel of Elastomeric Joint Sealants*, ASTM C 1305-16: *Standard Test Method for Crack Bridging Ability of Liquid Applied Waterproofing Membrane*, ASTM E 96/E96M-16: *Standard Test Methods for Water Vapor Transmission of Materials*, ASTM G 154-16: *Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials*, and ICC-ES AC212 4-2018: *Acceptance Criteria for Water-Resistive Coatings used as Water-Resistive Barriers over Exterior Sheathing.*

Sampling: The following materials were received by PRI.

<u>Product</u>	<u>Source</u>	<u>Date</u>	<u>Sampling</u>
DOWSIL™ 778	Auburn, MI	Jun. 11, 2021	Dow Silicones

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Results:

AAMA 714-19

Property	Test Method	Result	Requirement
Test Requirements			
Adhesive Strength to Substrates (lbf) 3 specimens; 1" x 1/16"; Cure 7d @ 73.4±3.6°F & 50±5%RH followed by; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min	ASTM C 794		
Concrete Masonry Units (CMU) primed with Dowsil Primer P		29	≥ 5
Cement Mortar Slabs primed with Dowsil Primer P		23	≥ 5
Plywood		29	≥ 5
OSB		12	≥ 5
Moisture content prior to application		8-9	Report
Water Penetration Around Nails [Pass/Fail] 5 specimens; 4" x 4" (applied to plywood); Two 1-1/4" roofing nails placed near center of specimen; Cond. 24h @ standard conditions; Test 1.2inw.c. @ 40±5°F for 24h; Visual Inspection for water infiltration	ASTM D 1970 Section 7.9	Pass	Pass
Bottom Can; [Water/No Water]		No Water	No Water
Nail Shank; [Water/No Water]		No Water	No Water
Underside of Plywood; [Water/No Water]		No Water	No Water
Water Penetration Around Nails [Pass/Fail] 5 specimens; 4" x 4" (bonded to plywood); 1/16" WFT Two 1-1/4" roofing nails placed near center of specimen; Cond. 24h @ 73.4±3.6°F & 50±5% RH followed by; 10 cycles; 8h @ 120±2°F followed by 16h @ -40±2°F Test 1.2inw.c. @ 40±5°F for 24h; Visual Inspection for water infiltration	ASTM D 1970 Section 7.9	Pass	Pass
Bottom Can; [Water/No Water]		No Water	No Water
Nail Shank; [Water/No Water]		No Water	No Water
Underside of Plywood; [Water/No Water]		No Water	No Water
Accelerated Aging (lbf/in) 3 specimens; 1" x 1/16"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 336h ASTM G 154 UVA Cycle 1; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min	ASTM G 154 ASTM C 794	24	≥ 5
Visual examination [Pass/Fail]		Pass	No change in appearance

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Property	Test Method	Result	Requirement
Elevated Temperature (lbf/in) 3 specimens; 1" x 1/16"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 7d @ 80°C; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min	AAMA 711 ASTM C 794 Level 3	17	≥ 5
Visual examination [Pass/Fail]		Pass	No change in appearance
Thermal Cycling (lbf/in) 3 specimens; 1" x 1/16"; Cement Mortar Slab Cond. vertically 24h @ 73.4±3.6°F; Cond. 8h @ 50±1°C followed by; Cond. 16h @ -40±1°C: total of 10 Cycle; Test Cond. 73.4±3.6°F & 50±5%RH; Rate 2.0"/min	AAMA 711 ASTM C 794	25	≥ 5
Visual examination [Pass/Fail]		Pass	No change in appearance
Crack Bridging Ability, Category I [Pass/Fail] 5 specimens; 51mm x 51mm; 1/16" WFT Cond. 14d @ 23±2°C & 50±10%RH to cure film; Cond. 7d @ 70±2°C; Test 10 cycles @ -26°C; Test Rate = 3.2mm/h from 0.0mm to 3.2mm Expose to 550 ml head of water for 24h extended position	ASTM C 1305/ AAMA 714 Section 5.6	Pass	No cracking, splitting, pinholes, or other conditions in the area of the joint in the substrates
Water Immersion (lbf) 3 specimens; 1" x 1/16"; Cure 21d @ 73.4±3.6°F & 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	AAMA 714 Section 5.7 ASTM C 794		
Anodized Aluminum After Immersion		13	≥ 5
Visual examination		Pass	Note change in appearance

Note(s): None.

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Statement of Compliance:

The product tested complies with AAMA 714-19: Voluntary Specification for Liquid Applied Flashing Used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings. The laboratory results presented in this report are representative of the material supplied.

Limits of Use:

1. For application to primed Concrete Masonry Units (CMU), primed Cement Mortar, Plywood, and OSB wall substrates.
2. Meets requirements for elevated temperature exposure Classification Level 3 – 80°C.
3. Meets requirements for Crack-Bridging requirements for Category I at 1/16" WFT.

Signed:



Anthony Catlett
Laboratory Manager

Signed:



Brent Barbeau
Manager

Date:

09/20/2021

Date:

09/20/2021

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	09/20/2021	4	NA

END OF REPORT

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