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CONSTRUCTION MATERIALS TECHNOLOGIES

LABORATORY TEST REPORT

Report for: DeckRite LLLC
3912 East Progress Street
North Little Rock, AR 72114

Product(s): 60 mil PVC with 3 oz. non-woven polyester backing	Manufacturer: O'Sullivan Films, Inc.
Date Received: April 18, 2012	Sampling: Client provided samples
PRI-CMT Project No.: DKR-003-02-01	Test Dates: Apr. 20, 2012 – Jan. 4, 2013

Purpose: Evaluate the physical properties for compliance with **CAN/CGSB 37.54-95 Polyvinyl Chloride Roofing and Waterproofing Membrane** Type III, Class B. Type III products are defined as “with a non-embedded fabric backing”. Class B is defined as “exposed roofing”.

Test Methods: Testing was completed in compliance with **CAN/CGSB 37.54-95 Polyvinyl Chloride Roofing and Waterproofing Membrane**. Test methods assigned or referenced include ASTM D 570: *Standard Test Method for Water Absorption of Plastics*; ASTM D 751: *Standard Test Method for Coated Fabrics*; ASTM D 1790: *Standard Test Method for Brittleness Temperature of Plastic Sheeting by Impact*; ASTM D 2136: *Standard Test Method for Coated Fabrics Low Temperature Bend Test*; ASTM E 96/E 96M: *Standard Test Methods for Water Vapor Transmission of Materials; and Waterproofing Materials*; and ASTM G 154: *Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials*.

Sampling: A roll of PVC decking membrane was provided in the color Slate Gray for testing by the O'Sullivan Films, Inc. from Winchester, VA on April 18, 2012. Client prepared lap samples were provided from on August 13, 2012.

DKR-003-02-01 PRI-CMT Accreditations: IAS TL-189; Miami-Dade 11-0429.05; Florida TST5878; Los Angeles TA24819; CRRC
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Results:

Property	Test Method	Results	Requirement
Physical Properties			
Thickness, (mm) 5 specimens			
Overall w/fleece backing removed	ASTM D 751	1.3	≥ 1.2
Coating	CAN/CGSB 37.54-95	0.8	≥ 0.4 No individual measurement less than 0.32
Breaking Strength, (kN/m) 5 specimens; 102 x 152 mm Test @ 23±2°C & 50±5%RH; Rate = 5±2 mm/s	ASTM D 751		
MD		51	≥ 35
CMD		45	≥ 35
Elongation at Break, (%) 5 specimens; 102 x 152 mm Test @ 23±2°C & 50±5%RH; Rate = 5±2 mm/s	ASTM D 751		
MD		116	≥ 15 PVC matrix intact at break
CMD		120	≥ 15 PVC matrix intact at break
Lap Joint Strength, (% of Breaking Strength) 5 specimens; 102 x 152 mm; Test @ 23±2°C & 50±5%RH; Rate = 5±2 mm/s	ASTM D 751		
Initial		86	≥ 75
After 7 days in boiling water		84	≥ 70
Low Temperature Impact (# of passing specimens) 10 specimens; Cond. 90 min @ -30±1°C; Test @ -30±1°C;	ASTM D 1790	Pass	8 of 10 specimens shall pass

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Property	Test Method	Results	Requirement
Retention of Properties after Heat Aging, (% of original) After 60 days at 80±1°C	CAN/CGSB 37.54-95		
Breaking Strength	ASTM D 751	92	≥ 90
Elongation at Break	ASTM D 751	92	≥ 90 PVC matrix intact at break
Low Temperature Flexibility	ASTM D 2136	Pass	Pass
Low Temperature Flexibility, 3 specimens with fleece backing removed; Cond. 4 h @ -40±1°C; Test @ -40±1°C; Bend 180° over 3.2 mm Ø rod	ASTM D 2136	Pass	Pass
Retention of Properties after Accelerated Weathering, (% of original) After 5000 h of UV/condensation exposure	ASTM G 53/G 154		
Visual Inspection	CAN/CGSB 37.54-95	Pass	No cracking, blistering, or appreciable color change
Elongation at Break	ASTM D 751	109	≥ 90 PVC matrix intact at break
Low Temperature Impact @ -20±1°C	ASTM D 2137	Pass	8 of 10 specimens shall pass
Low Temperature Flexibility – 6.4 mm Ø mandrel	ASTM D 2136	Pass	Pass
Water Vapor Transmission, (g/m ² in 24 h) 3 specimens; Test @ 23±1°C & 50±2% RH	ASTM E 96 Procedure A	0.2	≤ 4.0
Effect of Water Absorption, (% of original) After immersion for 7 days at 70±1°C			
Mass Increase w/fleece backing removed	ASTM D 570	2.2	≤ 3.0
Breaking Strength	ASTM D 751	91	≥ 90
Elongation at Break	ASTM D 751	91	≥ 90 PVC matrix intact at break
Dimensional Change, (%) After 6 h at 80±1°C	CAN/CGSB 37.54-95		
Without Loading - MD		0.4	≤ 0.5
Without Loading - CMD		0.3	≤ 0.5
With Loading - MD		0.1	≤ 0.5
With Loading - CMD		0.1	≤ 0.2

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Property	Test Method	Results	Requirement
Cone Penetration, (N) 5 specimens; 50 x 50 mm; Test @ 23±2°C & 50±5%RH; Rate = 1.27 mm/min	CAN/CGSB 37.54-95	85	≥ 30

Statement of Compliance:

The product tested has demonstrated compliance with the physical property requirements of **CAN/CGSB 37.54-95 Polyvinyl Chloride Roofing and Waterproofing Membrane** Type III, Class B. The laboratory test results presented in this report are representative of the material supplied.

Signed: 
 Steven Mueller
 Technician

Signed: 
 Zachary Priest, P.E.
 Director

Date: January 18, 2013

Date: January 18, 2013

Report Issue History:

Issue #	Date	Pages	Revision Description (if applicable)
Original	01/18/2013	4	NA

END OF REPORT

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