



# CONSTRUCTION MATERIALS

## TECHNOLOGIES

### LABORATORY TEST RESULTS

**Report for:** Winkler USA  
88 South State Street  
Hackensack, NJ 07601

**Attention:** Paul Sanraian

<b>Product ID(s):</b> Scudo	<b>Manufacturer:</b> Winkler USA
<b>Date(s) Received:</b> Feb. 6, 2013 May 18, 2015	<b>Sampling:</b> Winkler SRL
<b>PRI-CMT Project No.:</b> WNKL-002-02-01 WNKL-017-02-01	<b>Date(s) Tested:</b> Feb. 18, 2013 – Sep. 29, 2013 May 27, 2015 – Jun. 24, 2015

**Subject:** Evaluate *Winkler USA's Scudo* for waterproofing requirements in accordance with **ICC-ES AC29: Acceptance Criteria for Cold, Liquid-Applied, Below-Grade, Exterior Dampproofing and Waterproofing Materials.**

**Test Methods:** Testing was completed as described in ICC-ES AC29 (Approved June 2011): *Acceptance Criteria for Cold, Liquid-Applied, Below-Grade, Exterior Dampproofing and Waterproofing Materials.* The test methods assigned included ASTM C 836-06: *Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate wearing Course*, ASTM D 2939-03: *Standard Test Methods for Emulsified Bitumens Used as Protective Coatings*, ASTM D 5385-93(2006): *Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes*, ASTM E 96-05: *Standard Test Methods for Water Transmission of Materials*, and ASTM E 154-99: *Standard Test Method for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or Ground Cover.*

For testing, product was applied at 80mil wet (or 20ft<sup>2</sup>/gal).

**Product Sampling:** Product was provided by Winkler SRL. Winkler USA shall provide declaration certifying that the product submitted for testing is representative of the standard manufactured product.

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**Results:**


**ICC-ES AC29**

Property	Test Method	Result	Requirement
<b>Physical Requirements</b>			
Resistance to Deterioration in Contacting Soil Unsterilized Soil; No. 6 Seive; pH 5.5-7.0; Cond. @ 82.4±1.8°F & 70±3%RH;			
Weight Loss (%) After Soil Conditioning	ASTM E154	0.2	≤ 10
Water Vapor Permeance (Perm) After Soil Conditioning; 5 specimens; 3.5in ø; Weathering side to higher vapor pressure; Proc. A – 50±2%RH to ~0%RH @ 73.4°F	ASTM E96 Procedure A	0.1	≤ 1
Hydrostatic Pressure over cracks (ft of water) After Soil Conditioning; 3 specimens; 4in x 4in; crack = 2in x 0.0625in; Test Condition 73.4±3.6°F & 50±5%RH	ASTM D5385	NR	Report 50% of lowest value
Resistance to Water [ <i>Pass/Fail</i> ] 3 specimens; 4in x 4in; Cure. 24h @ 140±5°F followed by; Immerse 24h @ 75±5°F	ASTM D2939 Method A	Pass	No blistering or reemulsification
Remain in Place During Application [ <i>Pass/Fail</i> ] 1 specimen; 6in x 3in; 2 coats @ 40mils (wet) each ≈ 60mils (dry) Cond. vertical 24h @ 73.4±3.6°F & 50±5%RH	ASTM C836	Pass	As recommended by manufacturer ± 5 mils
Adhesion-in-Peel (after water immersion) (lbf/in) 4 specimens; 1in wide; Cond. 14d @ 73.4±3.6°F & 50±5%RH followed by; Cond. 7d @ 158±3.6°F; Immerse in distilled water for 7d @ 73.4±3.6°F Test Speed 2.0in/min; Test Condition 73.4±3.6°F & 50±5%RH	ASTM C794	6.4	≥ 1
Low Temperature Crack Bridging [ <i>Pass/Fail</i> ] 5 specimens; 2in x 2in; Cure. 14d @ 73.4±3.6°F & 50±5%RH followed by; Cond. 7d @ 158±3.6°F; Test 10 cycles @ -15°F; Test Rate = 0.125in/h from 0.000in to 0.125in; Visual Inspection in extended position	ASTM C1305	Pass	No Cracking
Extensibility after Heat Aging [ <i>Pass/Fail</i> ] 3 specimens; 3in x 4in; Cond. 14d @ 73.4±3.6°F & 50±10%RH followed by; Cond. 14d @ 158±3.6°F; Test Rate = 0.5in/min from 0.00in to 0.25in; Visual Inspection in extended position	ASTM C1522	Pass	No Cracking

Notes: See Appendix for individual specimen results.

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**Statement of Compliance:** The product evaluated complies with the waterproofing requirements of **ICC-ES AC29: Acceptance Criteria for Cold, Liquid-Applied, Below-Grade, Exterior Dampproofing and Waterproofing Materials.**

Signed:   
Rick Range  
Laboratory Technician

Signed:   
Brad Grzybowski  
Managing Director

Date: July 23, 2015

Date: July 23, 2015

**Report Issue History:**

Issue #	Date	Pages	Revision Description (if applicable)
Original	12/03/2014	4	NA
Revision1	07/23/2015	4	Included test results for waterproofing requirements

**APPENDIX FOLLOWS**

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### Appendix: Test Data Worksheet

ICC-ES AC29: Acceptance Criteria for Cold, Liquid-Applied, Below-Grade, Exterior Dampproofing and Waterproofing Materials											
Section 3.0 Required Data											
Physical Properties											
Property	Method	Test Data						Test Result		Requirement	Outcome
		1	2	3	4	5	6	Average	Std. Dev.		
Resistance to Deterioration in Contacting Soil; [Pass/Fail]	ASTM D 226										Pass
Weight Loss (%)	ASTM E154	0.18	0.21	0.21	0.22	0.18	0.20	0.2	0.0	10	
Water Vapor Transmission (Perm)	ASTM E96	0.10	0.11	0.11	0.12	0.10		0.1	0.0	1	
Hydrostatic Pressure (psi)	ASTM D5385							No Data	No Data	Report 50%	
Resistance to Water; [Pass/Fail]	ASTM D2939	No Blister	No Blister	No Blister				No Blister	NA	No Blister	Pass
Remain in Place During Application; [Pass/Fail]	ASTM C836									0.060	Pass
Target 0.060in mils (dry)		0.061	0.062	0.061	0.060	0.061		0.061	0.001		
Adhesion in Peel; (lb/in-width) After 7-Day Water Immersion	ASTM C794									1	Pass
Low Temperature Crack Bridging; [Pass/Fail]	ASTM C1305	No Cracking	No Cracking	No Cracking	No Cracking	No Cracking		No Cracking	NA	No Cracking	Pass
Extensibility After Heat Aging; [Pass/Fail]	ASTM C1522	No Cracking	No Cracking	No Cracking				No Cracking	NA	No Cracking	Pass

**END OF REPORT**

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