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Date: September 8, 2014

Attn: Peter Van Rijn

Report No.: 47065

REPORT

Lab Sample No.:

47065 Den Braven Silicone NO (lot# 4860831)

PROCEDURE

The sample was tested to determine compliance with the ASTM C-920, Standard Specifications for Elastomeric Joint Sealants, Type S, Grade NS, Class 50, Use; T₂, NT, A, G, and M.

Cyclic movement was conducted at +50% extension and -50% compression. The aluminum and glass substrates were solvent cleaned, rinsed in deionized water and air dried. The mortar substrates were wet ground, wiped with a damp cloth and air dried.

RESULTS

<u>Specification and Test/Method</u>	<u>Results</u>	<u>Pass/Fail</u>
8.1.2 Rheological Properties (ASTM C639, Type II)		
Vertical (No sag or flow >3/16 in. (>4.8 mm))		Pass
122°F (50°C)	1/16 (1.6)	
40°F (4.4°C)	<1/16 (<1.6)	
Horizontal (No deformation)		Pass
122°F (50°C)	None	
40°F (4.4°C)	None	
8.2.2 Extrusion Rate (ASTM C1183, Proc A), >10 ml/min	77.1	Pass
8.4 Hardness (ASTM C661)		Pass
Use NT (A2 < 60)	18	
Use T ₂ (A2 ≤ 25)	18	
8.5 Effect of Heat Aging (ASTM C1246)		Pass
Weight Loss (≤ 7%)	0.6	
Cracking (None)	None	
Chalking (None)	None	

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<u>Specification and Test/Method</u>	<u>Results</u>	<u>Pass/Fail</u>
8.6 Tack-Free Time (ASTM C679) At 72 hours, no transfer using a 40g wt. for 30 seconds	No transfer	Pass
8.7 Stain and Color Change (ASTM C510)		
a. No visible stain on top of white cement mortar bar	No stain	Pass
b. No unacceptable color change	No color change	Pass
8.8 Adhesion and Cohesion under Cyclic Movement (ASTM C719) ≤ 1-1/2 in ² (9.7cm ²) total bond loss and cohesive separation		
Substrate	Total Bond Loss & Cohesive Separation	
a. Mortar	0.50 in ² (3.2)	Pass
b. Aluminum	0.75 in ² (4.8)	Pass
c. Glass	1.20 in ² (7.7)	Pass
8.9 Adhesion-In-Peel (ASTM C794) ≥ 5 lbf/in. width (22.25 N) ≤ 25% bond loss		
a. Mortar	lbf/in width	Bond Loss
1.	10.1 (44.9)	10%
2.	9.6 (42.7)	10%
3.	<u>10.0 (44.5)</u>	<u>15%</u>
Average	9.9 (44.1)	12%
b. Aluminum	lbf/in width	Bond Loss
1.	9.2 (40.9)	0%
2.	8.0 (35.6)	0%
3.	<u>8.3 (36.9)</u>	<u>0%</u>
Average	8.5 (37.8)	0%
c. Glass	lbf/in width	Bond Loss
1.	4.8 (21.4)	25%
2.	5.5 (24.5)	20%
3.	<u>5.0 (22.3)</u>	<u>25%</u>
Average	5.1 (22.7)	23%
8.10 Adhesion-in-Peel after 200 hours UV through glass and 7 day water soak [ASTM C1442, Section 7.3 (UVA/ASTM G154, Cycle 1)]		
	lbf/in width	Bond Loss
1.	5.5 (24.5)	20%
2.	5.0 (22.3)	20%
3.	<u>5.4 (24.0)</u>	<u>25%</u>
Average.	5.3 (23.6)	22%

<u>Specification and Test/Method</u>	<u>Results</u>	<u>Pass/Fail</u>
8.11 Effect of Accelerated Weathering (ASTM C793)		
a. No cracks greater than #2 after UV exposure	No cracks (0)	Pass
b. No cracks greater than #2 after exposure to cold and bend	No cracks (0)	Pass

DISCUSSION

The submitted sample of sealant conforms to the requirements of ASTM C920 "Standard Specification for Elastomeric Joint Sealants", Type S, Grade NS, Class 50, Use T₂, NT, A, G, and M.

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