



# CONSTRUCTION MATERIALS

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## TECHNOLOGIES

### LABORATORY TEST RESULTS

**Report for:** Zhengzhou Zhongyuan Silande High Technology Co., Ltd.  
No. 28 Dongqing West St.,  
Zhengzhou Hi-Tech Development Zone  
Zhengzhou, Henan  
P.R. China – 450001

**Attention:** Judy Huang

<b>Product Name:</b> MF896L	<b>Manufacturer:</b> Zhengzhou Zhongyuan Silande High Technology Co., Ltd.
<b>Date Received:</b> See Sampling Section	<b>Source:</b> See Sampling Section
<b>PRI-CMT Project No.:</b> LCY-003-02-01	<b>Dates Tested:</b> April 7, 2017 – January 10, 2018

**Purpose:** Determine specification properties for *Zhengzhou Zhongyuan Silande High Technology Co., Ltd.'s MF896L* for compliance with ASTM D 5893: *Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements*. The product is a one part, cold applied sealant.

**Test Methods:** Testing was completed as described in ASTM D 5893/D5893M-10: *Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements*. Test methods assigned or referenced include 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 792: *Standard Test Method for Effects of Heat Aging on Weight Loss, Cracking, and Chalking of Elastomeric Sealants*, ASTM C 793: *Standard Test Method for Effects of Laboratory Accelerated Weathering on Elastomeric Joint Sealants*, ASTM C 1183: *Standard Test Method for Extrusion Rate of Elastomeric Sealants*, ASTM D 412: *Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension*, ASTM D 2202: *Standard Test Method for Slump of Sealants* and ASTM D 5329: *Standard Test Methods for Sealants and Fillers, Hot-Applied, for Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements*.

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**Sampling:** The following materials were received by PRI.

**Product**  
 MF896L

**Source**  
 Zhengzhou Zhongyuan Silande High  
 Technology Co., Ltd.

**Date**  
 Feb. 23, 2017

**Results of Testing:**

Property	Test Method	Result	Requirement
<b>Physical Property Requirements</b>			
Cure Evaluation [ <i>Pass/Fail</i> ] 1 specimen; 1/2" x 1/2" x 2"; Cure specimen 21d+4h @ 73.4±3.6°F & 50±5%RH;	ASTM D 5893 Sec. 9.1	Pass	No presence of any uncured material
Rheological Properties 1 specimen; 3/4" x 1/2" x 6"; Cond. sealant 16-24h @ 40±3.6°F			
Type NS – Slump (mm)	ASTM D 2202	2.0	≤ 7.6
Type SL – Type I [ <i>Pass/Fail</i> ]	ASTM C 639	NA	Smooth, level with no bubbling
Extrusion Rate (ml/min) 1 specimen; Cond. sealant 16h @ 73.4±3.6°F & 50±5%RH; Test Cond. @ 73.4±3.6°F & 50±5%RH Test with polyethylene nozzle @ 40psi for 60s	ASTM C 1183 Procedure A		
Specific Gravity		1.3	Report
Extrusion Rate		220	≥ 20
Tack-Free Time [ <i>Pass/Fail</i> ] 1 specimen; Test Cond. 73.4±3.6°F & 50±5%RH;	ASTM C 679	Pass	No transfer of the sealant when tested at 5h±10min
Actual Tack Free Time (min)		120	Report
Effects of Heat Aging (%) 2 specimens; 5" x 1-1/2" x 1/4"; Cure 7d @ 73.4±3.6°F & 50±5%RH; Test Cond. 21d @ 158±3.6°F	ASTM C 792		
Percent Weight Loss		1	≤ 10
Visual Examination for presence of cracks or chalking		Pass	No cracking or chalking
<i>Continued on following page</i>			

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Property	Test Method	Result	Requirement
Bond [Pass/Fail] 3 specimens per condition; 1/2" x 1/2" x 2"; Cure 21d+4h @ 73.4±3.6°F and 50±5%RH; Test 5 cycles; Rate 1/8 in/h Extension 1/2"	ASTM D 5893/ ASTM D 5329		
Non-Immersed Bond Tested @ -29+1°C		Pass	No crack, separation, or other opening
Water Immersed Bond Test Condition 96h immersed @ 73.4±3.6°F Tested @ -29+1°C		Pass	No crack, separation, or other opening
Oven-Aged Bond Test Condition 7d+2h @ 70+1°C Tested @ -29+1°C		Pass	No crack, separation, or other opening
Hardness [dimensionless] 2 specimens; 5" x 1-1/2" x 1/4"; 3 measurement readings per specimen (6 total); Cure. 21d @ 73.4±3.6°F & 50±5%RH	ASTM C 661		
Cond. 2h @ -29+1°C (Durometer Type A-2)		20	≤ 25
Cond. 23+2°C (Durometer Type 00)		58	≥ 30
Flow [Pass/Fail] 1 specimens; 40mm x 60mm x 3.2mm; Cure. 21d @ 73.4±3.6°F & 50±5%RH; Test Cond 72+0.5h @ 200+2°F	ASTM D5893/ ASTM D 5329	Pass	No flow
Ultimate Elongation (%) 5 specimens; Die C; Rate 20in/min; Cure 21d+4h @ 73.4±3.6°F & 50±5%RH Tested @ 73.4±3.6°F & 50±5%RH;	ASTM D 412 Method A	> 964	≥ 600
Tensile Stress @ 150% Elongation (psi) 5 specimens; Die C; Rate 20in/min Tested @ 73.4±3.6°F & 50±5%RH;	ASTM D 412 Method A	13	≤ 45
Effects of Accelerated Weathering [Pass/Fail] 3 specimens; 5" x 1-1/2" x 1/8"; Cure 72h @ 73.4±3.6°F and 50±5%RH; Test Cond. 5000h ASTM G 154, Cycle 1; Test Cond. 24h @ -15±3.6°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
Resilience (%) 1 specimen; 6 oz.; Cure 21d+4h @ 73.4±3.6°F & 50±5%RH; Test Cond 7d + 2h @ 158+2°F Tested @ 73.4±3.6°F & 50±5%RH;	ASTM D5893/ ASTM D 5329	81	≥ 75


Note(s): None

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**Statement of Compliance:**

The product tested complies with the specification properties within ASTM D 5893: *Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements*. The product was evaluated as a non-sag, single component silicone sealant. The laboratory test results presented in this report are representative of the material supplied.

Signed:   
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Anthony Catlett  
Laboratory Technician

Signed:   
\_\_\_\_\_  
Jason Simmons  
Director

Date: \_\_\_\_\_  
January 10, 2018

Date: \_\_\_\_\_  
January 10, 2018

**Report Issue History:**

Issue #	Date	Pages	Revision Description (if applicable)
Original	01/10/2018	4	NA

**END OF REPORT**

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