



# NATIONAL CERTIFIED TESTING LABORATORIES

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**Report No.** NCTL-110-20212-1

**Report Date:** 11/03/17

**Manufacturer:** Quanex Building Products

**Plant Location:** 800 Cochran Avenue, Cambridge, OH 43725

**Test Specification and Methods:** Complies with ASTM E2190-10 and ASTM E2188-10, ASTM E2189-10.

**Fabrication/ Manufacture Date:** 04/11/17

**Test Authorized by** (name of individual): Donna Hinkle

**Date Received by Laboratory:** 05/17/17

**Date Authorized to Test:** 05/12/17

**Test Start Date:** 07/10/17

## DESCRIPTION OF TEST SPECIMEN

<b>Size:</b> (width & height)	14" x 20"	355 mm x 505 mm
<b>Sightline:</b>	0.341"	8.66 mm
<b>Thickness of Glass:</b> Overall	0.642"	16.31 mm
	0.183"	4.65 mm
	0.183"	4.65 mm
<b>Thickness of Air Space:</b>	0.276"	7.01 mm
<b>Surface Coating Location(s):</b>	Surface 2	
<b>Connecting Methods/Components:</b> (type & number)	Butted and Sealed	
<b>Corner Key Construction:</b>	Bent	

*NOTE: The following information is from audit documentation and cannot be verified by this lab.*

<b>Frame Construction:</b>	Not Applicable
<b>Corner Key Detail(s):</b>	(3) Bent Corners and 4 <sup>th</sup> Corner Seamed
<b>Glass Coatings:</b>	Clear/ Low E Edge Deleted
<b>Sealant Type Primary:</b> (dimensions)	Duraseal (Quanex) (0.262" 6.65 mm)
<b>Sealant Type Secondary:</b> (dimensions)	Not Applicable
<b>Spacer:</b> (composition & configuration)	Duraseal (Quanex)
<b>Desiccant:</b> (type & quantity)	Imbedded in spacer
<b>Tube:</b> (type)	Not Applicable
<b>Muntin Bars:</b> (composition)	Not Applicable
<b>Gas Fill Plug:</b> (type)	Not Applicable

**Seal Durability:**

Specimen Number	Initial Frost/Dew Point 07/10/17	E2189 Fogging Test (7 days)	High Humidity Test (14 days)	Accelerated Weather Cycle (63 days)	High Humidity Test (28 days)
			Subsequent Frost/Dew Point 07/25/17	Subsequent Frost/ Dew Point 09/27/17	Subsequent Frost/ Dew Point 11/03/17
1	≤ -60° F		≤ -60° F	≤ -60° F	≤ -60° F
2	≤ -60° F		≤ -60° F	≤ -60° F	≤ -60° F
3	≤ -60° F		≤ -60° F	≤ -60° F	≤ -60° F
4	≤ -60° F		≤ -60° F	≤ -60° F	≤ -60° F
5	≤ -60° F		≤ -60° F	≤ -60° F	≤ -60° F
6	≤ -60° F		≤ -60° F	≤ -60° F	≤ -60° F
7	≤ -60° F				
8	≤ -60° F				
9	≤ -60° F				
10	≤ -60° F				
11		No Fog			
12		No Fog			
Date Removed:		07/24/17	07/24/17	09/26/17	10/30/17

**NOTE:** Fogging test thermocouple range is 50° C ± 3° with the temperature differential between TC1 and TC2 as well as TC3 and TC4 not exceeding 3° C

Gas Content - ASTM E2649

**Initial Gas Fill** (average % for (10) durability units - both air gaps); Must be 90% or greater

Specimen No.	1	2	3	4	5	6	7	8	9	10
10 Durability Units	92	90	91	94	90	95	91	92	92	94
Average %:	<b>92</b>									

Initial: Testing performed on 05/24/17

**Gas Fill after Durability** (average % for (6) durability units after weathering & durability); Must be 80% or greater

Specimen No.	1	2	3	4	5	6
6 Durability Units	91	90	91	92	90	94
Average %:	<b>91</b>					

After Durability: Testing performed on 11/02/17

Device Used: Sparklike, Ltd.'s Gasglass Handheld Gas Fill Analyzer for Windows and Doors.

At the conclusion of testing, there was no fog, visible deposits or glass breakage meeting specification qualification requirements.

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**National Certified Testing Laboratories**



Drew Klinedinst  
Technician



Robert H. Zeiders, P.E.  
Engineering & Quality Manager (P.E. Reg. #: PE019556E)

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## APPENDIX A

### **Section 1:**

Representative sections of the test specimen will be retained per procedure by NCTL. This testing facility assumes that all information provided by the client is accurate. (Reference: NCTL-110-20212-1)

### **Section 2:**

#### **Revision Information:**

<u>Identification</u>	<u>Date</u>	<u>Revision Details</u>
Original Issue	11/03/17	Not Applicable