



NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200
FAX (717) 767-4100
www.nctlinc.com

Report No. NCTL-110-20211-1

Report Date: 11/09/17

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

Size: (width & height)	14" x 20"	355 mm x 505 mm
Sightline:	0.317"	8.05 mm
Thickness of Glass: Overall	0.643"	16.33 mm
	0.181"	4.60 mm
	0.181"	4.60 mm
Thickness of Air Space:	0.281"	7.13 mm
Surface Coating Location(s):	Surface 2	
Connecting Methods/Components: (type & number)	Butted and Sealed	
Corner Key Construction:	Bent	

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

Frame Construction:	Not Applicable
Corner Key Detail(s):	(3) Bent Corners and 4 th Corner Seamed
Glass Coatings:	Clear/ Low E Edge Deleted
Sealant Type Primary: (dimensions)	Duralite (Quanex) (0.234" 5.94 mm)
Sealant Type Secondary: (dimensions)	Not Applicable
Spacer: (composition & configuration)	Duralite (Quanex)
Desiccant: (type & quantity)	Imbedded in spacer
Tube: (type)	Not Applicable
Muntin Bars: (composition)	Not Applicable
Gas Fill Plug: (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	90	93	91	93	91	92	92	92	95	90
Average %:	91									

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	90	92	91	93	90	91
Average %:	91					

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.

This test report was prepared by National Certified Testing Laboratory (NCTL), for the exclusive use of the above named client and it does not constitute certification of this product. The results are for the particular specimen tested and do not imply the quality of similar or identical products manufactured or installed from specifications identical to the tested product. The test specimen was supplied to NCTL by the above named client. NCTL is a testing lab and assumes that all information provided by the client is accurate and does not guarantee or warranty any product tested or installed.

A copy of this report will be retained by NCTL for a period of four (4) years. Test specimen samples will be retained by NCTL per applicable requirements (30 days pass & 90 days fail). This report does not constitute certification or approval of the product, which may only be granted by a certification program validator or recognized approval entity. All tests were conducted in full compliance with the above-referenced test methods, NFRC 706 and inspection agency requirements. This report may not be reproduced, except in full, without the written consent of NCTL.

National Certified Testing Laboratories



Drew Klinedinst
Technician



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

DWK/dro

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-110-20211-1)

Section 2:

Revision Information:

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