



# NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200  
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**AAMA/WDMA/CSA 101/I.S.2/A440-11**  
**AAMA/WDMA/CSA 101/I.S.2/A440-08**  
**AAMA/WDMA/CSA 101/I.S.2/A440-05**

## TEST REPORT SUMMARY

Rendered to:

**REMODELERS SUPPLY CENTER**  
2500 North Pulaski  
Chicago, IL 60639

**PRODUCT TYPE: Picture Window**

**SERIES/ MODEL: "ClimateGuard 500"**

Title	Summary of Results
Primary Product Designator AAMA/WDMA/CSA 101/I.S.2/A440-11 AAMA/WDMA/CSA 101/I.S.2/A440-08 AAMA/WDMA/CSA 101/I.S.2/A440-05	Class R-PG60: Size tested 1219 x 1219 mm (~48 x 48 in) - Type FW Class R-PG60: Size tested 1219 x 1219 mm (48 x 48 in) - Type FW FW-R60 1219 x 1219 (48 x 48)
Positive Design Pressure	+2880 Pa (+60.15 psf)
Negative Design Pressure	-2880 Pa (-60.15 psf)
Air Infiltration	0.1 L/s/m <sup>2</sup> (<0.01 cfm/ft <sup>2</sup> )
Water Penetration Resistance Test Pressure	440 Pa (9.19 psf)
Uniform Load Structural Test Pressure	±4320 Pa (90.23 psf)
Forced Entry Resistance	ASTM F588-07 - Grade 10 Pass

Test Completed: 09/23/14

Reference must be made to Report No. NCTL-110-17415-1 dated 10/15/14 for complete test specimen description and data.

For National Certified Testing Laboratories

Jay Leader  
Technician



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**AAMA/WDMA/CSA 101/I.S.2/A440-05**

## STRUCTURAL TEST REPORT

**NCTL-110-17415-1**

REPORT TO:  
REMODELERS SUPPLY CENTER  
2500 NORTH PULASKI  
CHICAGO, IL 60639

REPORT NUMBER: NCTL-110-17415-1  
REPORT DATE: 10/15/14

PRODUCT:  
**"CLIMATEGUARD 500"**  
**PICTURE WINDOW**



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**Report Number** NCTL-110-17415-1

**Report Date** 10/15/14

**Report To** REMODELERS SUPPLY CENTER  
2500 North Pulaski  
Chicago, IL 60639

**Test Date** 09/23/14

**Specification** AAMA/WDMA/CSA 101/I.S.2/A440-11  
NAFS 2011 - North American Fenestration Standard/Specification for windows, doors, and skylights  
AAMA/WDMA/CSA 101/I.S.2/A440-08  
NAFS North American Fenestration Standard/Specification for windows, doors, and skylights  
AAMA/WDMA/CSA 101/I.S.2/A440-05  
Standard/Specification for Windows, Doors, and Unit Skylights

**Performance Results** AAMA/WDMA/CSA 101/I.S.2/A440-11  
Class R-PG60: Size tested 1219 x 1219 mm (~48 x 48 in)-Type FW  
AAMA/WDMA/CSA 101/I.S.2/A440-08  
Class R-PG60: Size tested 1219 x 1219 mm (48 x 48 in)-Type FW  
AAMA/WDMA/CSA 101/I.S.2/A440-05  
FW-R60 1219 x 1219 (48 x 48)

## Description of Specimen Tested

Note: All dimensions are in the order (Width x Height x Thickness) unless otherwise noted.

**Model/ Series** "Climateguard 500"

**Configuration** Picture Window

**Frame Size** Overall  
1219 mm x 1219 mm (48" x 48")

**Viewing Area** Fixed Lite  
1114 mm x 1114 mm (43.875" x 43.875")

**Frame Type** Extruded vinyl

**Joint Construction** Frame  
Mitered, welded

**Glazing Components**  
Overall 22.10 mm (0.870") nominal  
Glass Thickness (2) Lites of 3 mm (0.117") nominal annealed glass  
Spacer Type/Size 16.15 mm (0.636") Coated U-shaped steel spacer (Type CU-D)  
Glazing System Interior glazed with a silicone back-bedding, silicone heel bead and a snap-in rigid vinyl glazing bead sealed with silicone

**Weatherstrip** No weatherseals employed

<b>Operating Hardware</b>	No operating hardware employed
<b>Auxiliary</b>	No auxiliary items employed
<b>Reinforcement</b>	No reinforcement employed
<b>Weep Description</b>	
Size	25.4 mm (1.0") wide by 6.35 mm (0.25") high with plastic weep cover
Location	95.25 mm (3.75") From each end of the exterior sill face
<b>Interior/ Exterior Surface Finish</b>	White vinyl (PVC)
<b>Sealant</b>	
Location	Exterior glazing perimeter
Material	Silicone
<b>Insect Screen</b>	No screen employed
<b>Installation Method</b>	The window was installed in a 50.8 mm x 254 mm (2" x 10") spruce-pine-fir lumber test buck. 25.4 mm x 12.7 mm (1" x 0.5") Wood blind stops were located at the interior and exterior frame perimeter. Each blind stop was secured with (1) 31.75 mm (1.25") brad staple located at 76.2 mm (3") from each end and 203.2 mm (8") on center thereafter. The interior and exterior perimeters were sealed with silicone.

### ***Test Results - AAMA/WDMA/CSA 101/I.S.2/A440-2011, 2008 & 2005***

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<u>Paragraph</u>	<u>Test</u>
5.3.2.1/ 9.3.2	Air Leakage Resistance ASTM E283-04(12)
	The tested specimen meets or exceeds the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-2011, 2008, and 2005 for air infiltration at 75 Pa (1.6 psf).
	Maximum Allowable = 1.5 L/s/m <sup>2</sup> (0.3 cfm/ft <sup>2</sup> )
	Extraneous Air Leakage = 0.19 L/s (0.4 cfm)
	Total Air Leakage = 0.19 L/s (0.4 cfm)
	Air Infiltration Rate = 0.1 L/s/m <sup>2</sup> (<0.01 cfm/ft <sup>2</sup> )

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<u>Paragraph</u>	<u>Test</u>
5.3.3/ 9.3.3	Water Penetration Resistance ASTM E547-00(09)
	<u>3.4 L/ (min• m<sup>2</sup>) (5.0 gph/ft<sup>2</sup>)</u>
	No Leakage after 4 cycles of 5 minutes at 440 Pa (9.19 psf)

**NOTE:** Tested without insect screen

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Paragraph      Test  
 5.3.4.2/ 9.3.4.2 Uniform Load Deflection at Design Pressure  
 ASTM E330-14

No damage after positive	2880 Pa (60.15 psf) held for 10 seconds
No damage after negative	2880 Pa (60.15 psf) held for 10 seconds
Measured Deflection <sub>Positive</sub>	= 0.66 mm (0.026 inches)
Measured Deflection <sub>Negative</sub>	= 0.61 mm (0.024 inches)

Paragraph      Test  
 5.3.4.3/ 9.3.4.3 Uniform Load Structural Test  
 ASTM E330-14

No damage after positive	4320 Pa (90.23 psf) held for 10 seconds
No damage after negative	4320 Pa (90.23 psf) held for 10 seconds
Measured Permanent Set <sub>Positive</sub>	= 0.03 mm (0.001 inches)
Measured Permanent Set <sub>Negative</sub>	= 0.08 mm (0.003 inches)
Maximum Allowed (0.4%)	= 4.80 mm (0.189 inches)

**NOTE:** Deflection and Permanent Set measurements taken on the head over a 1200 mm (47.25") span.

Paragraph      Test  
 5.3.5/ 9.3.5 Forced Entry Resistance  
 ASTM F588-07

Type D Window Assembly/ Grade 10: = Pass

<u>Test</u>	
Disassembly	= No Entry
Sash Manipulation	= No Entry

**NOTE:** 1. T1 = 5 minutes, L1 = 667 N (150 lbf), L2 = 333 N (75 lbf), L3 = 111 N (25 lbf)  
 2. Loads were held for 60 seconds.

Paragraph      Test  
 5.3.6.2/ 9.3.6.2 Thermoplastic Corner Weld Test (PVC products only) = Pass

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. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen are to be drawn from the ASTM E330 test. Forced entry resistance test equipment used is in compliance with Section 7 of the ASTM F588-07 test method. Foam tape is mounted to the perimeter of the test buck prior to clamping to the test wall. 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. The results in this report are actual tested values and are applicable to the specimen tested only, using the components and construction methods described herein.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. Component drawings were reviewed for product verification. The bill of materials contains details with any deviations noted. Ambient conditions during the referenced testing are available upon request. A copy of this report along with representative sections of the test specimen will be retained by NCTL. 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 referenced specifications and/or test methods. This report is the joint property of National Certified Testing Laboratories Inc. and the Client to whom it is issued. Permission to reproduce this report by anyone other than National Certified Testing Laboratories Inc and the Client must be granted in writing by both of the above parties. This report may not be reproduced, except its entirety, without the written consent of NCTL.

**National Certified Testing Laboratories**A digital signature in cursive script that reads "Jay Leader". The signature is overlaid on a circular logo containing the letters "NCTL". Below the signature, the words "DIGITAL SIGNATURE" are printed in a small, sans-serif font.

Jay Leader  
Technician

A digital signature in cursive script that reads "R. H. Zeiders". The signature is overlaid on a circular logo containing the letters "NCTL". Below the signature, the words "DIGITAL SIGNATURE" are printed in a small, sans-serif font.

Robert H. Zeiders, P.E.  
Vice-President Engineering & Quality

NJL/ drn

Attachments

Appendix A – Revision Summary

Appendix B – Drawings