



## TEST REPORT

**Report No.:** E1050.03-501-47

**Rendered to:**

CLIMATE GUARD MANUFACTURING  
Chicago, Illinois

**PRODUCT TYPE:** PVC Fixed Window  
**SERIES/MODEL:** CG THERMAFORCE

**SPECIFICATION(S):** 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.*

CSA A440S1-09, *Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440, NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights.*

**Test Date(s):** 09/05/14

**Through:** 11/17/14

**Report Date:** 07/12/16



**SUMMARY OF RESULTS**

<b>Summary of Results</b>		
<b>Title</b>	<b>Test Specimen #1</b> <i>Tape glazed with 1/8" glass</i>	<b>Test Specimen #2</b> <i>Silicone glazed with 3/16" glass</i>
AAMA/WDMA/CSA 101/I.S.2/A440-08 and -11	Class CW-PG50 1829 x 1905 (72 x 75)-FW	Class CW-PG70 1524 x 1600 (60 x 63)-FW
AAMA/WDMA/CSA 101/I.S.2/A440-05	FW-C50 1829 x 1905 (72 x 75)	FW-C70 1524 x 1600 (60 x 63)
Design Pressure	±2400 Pa (±50.13 psf)	±3360 Pa (±70.18 psf)
Air Infiltration	<0.1 L/s/m <sup>2</sup> (<0.01 cfm/ft <sup>2</sup> )	N/A
Canadian Air Infiltration/Exfiltration Level	Fixed	N/A
Water Penetration Resistance Test Pressure	580 Pa (12.11 psf)	N/A

**Test Completion Date:** 11/17/14

Reference must be made to Report No. E1050.03-501-47, dated 07/12/16 for complete test specimen description and detailed test results.



**1.0 Report Issued To:** Climate Guard Manufacturing  
2662 N. Pulaski Road  
Chicago, Illinois 60639

**2.0 Test Laboratory:** Architectural Testing, Inc.  
1140 Lincoln Avenue  
Springdale, Pennsylvania 15144  
724-275-7100

**3.0 Project Summary:**

**3.1 Product Type:** PVC Fixed Window

**3.2 Series/Model:** CG THERMAFORCE

**3.3 Compliance Statement:** Results obtained are tested values and were secured by using the designated test method(s). The specimens tested successfully met the performance requirements for the following ratings:

Test Specimen	Title	Summary of Results
1	101/I.S.2/A440-08 and -11	Class CW-PG50 1829 x 1905 (72 x 75)-FW
1	101/I.S.2/A440-05	FW-C50 1829 x 1905 (72 x 75)
2	101/I.S.2/A440-08 and -11	Class CW-PG70 1524 x 1600 (60 x 63)-FW
2	101/I.S.2/A440-05	FW-C70 1524 x 1600 (60 x 63)

This product was originally tested as the Deceuninck North America, LLC Series/Model 440.001 PW-001, PVC Fixed Window and is a reissue of the original Report No. E1050.01-501-47. This report is reissued in the name of Climate Guard Manufacturing through written authorization by Deceuninck North America, LLC.

**3.4 Test Dates:** 09/05/14 - 11/17/14

**3.5 Test Record Retention End Date:** All test records for this report will be retained until September 17, 2018.

**3.6 Test Location:** Deceuninck North America, LLC test facility in Monroe, Ohio. Calibration of test equipment was performed by Architectural Testing in accordance with AAMA205-01 "In-Plant Testing Guidelines for Manufacturers and Independent Laboratories".

**3.7 Test Specimen Source:** The test specimen(s) were provided by the client. Representative samples of the test specimen(s) will be retained by Architectural Testing for a minimum of four years from the test completion date.

**3.0 Project Summary: (Continued)**

**3.8 Drawing Reference:** The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix C. Any deviations are documented herein or on the drawings.

**3.9 List of Official Observers:**

<u>Name</u>	<u>Company</u>
Dean Erbaugh	Deceuninck North America, LLC
James Grippo	Architectural Testing, Inc.

**4.0 Test Specification(s):**

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.*

CSA A440S1-09, Canadian Supplement to AAMA/WDMA/CSA 101/I.S.2/A440, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights.*

**5.0 Test Specimen Description:**

**5.1 Product Sizes:**

**Test Specimen #1:**

Overall Area: 3.5 m <sup>2</sup> (37.5 ft <sup>2</sup> )	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1829	72	1905	75

**Test Specimen #2:**

Overall Area: 2.4 m <sup>2</sup> (26.3 ft <sup>2</sup> )	Width		Height	
	millimeters	inches	millimeters	inches
Overall size	1524	60	1600	63

**5.0 Test Specimen Description:** (Continued)

*The following descriptions apply to all specimens.*

**5.2 Frame Construction:**

Frame Member	Material	Description
Head, sill, and jambs	PVC	Extruded

	Joinery Type	Detail
All corners	Mitered	Thermally welded

**5.3 Weatherstripping:** No weatherstripping was utilized.

**5.4 Glazing:** *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

Test Specimen	Glass Type	Spacer Type	Interior Lite	Exterior Lite	Glazing Method
#1	7/8" IG	Butyl, single sealed	1/8" annealed	1/8" annealed	Set from the exterior against double-sided adhesive tape and secured with rigid vinyl glazing beads.
#2	7/8" IG	Butyl, single sealed	3/16" annealed	3/16" annealed	Set from the exterior against a silicone sealant and secured with rigid vinyl glazing beads.

Test Specimen	Quantity	Daylight Opening		Glass Bite
		millimeters	inches	
#1	1	1711 x 1788	67-3/8 x 70-3/8	1/2"
#2	1	1407 x 1483	55-3/8 x 58-3/8	1/2"

**5.0 Test Specimen Description:** (Continued)

**5.5 Drainage:**

<b>Drainage Method</b>	<b>Size</b>	<b>Quantity</b>	<b>Location</b>
Weepslot	7/8" wide by 1/8" deep	2	Exterior sill face, one at each end.
Weepslot	7/8" wide by 1/8" deep	2	Sill glazing pocket, one at each end.

**5.6 Hardware:** No hardware was utilized.

**5.7 Reinforcement:** No reinforcement was utilized.

**6.0 Installation:**

Each specimen was installed into a Spruce-Pine-Fir wood buck. The rough opening allowed for a 3/16" shim space. The nail fin perimeter of the specimen was sealed with a silicone sealant.

<b>Location</b>	<b>Anchor Description</b>	<b>Anchor Location</b>
Integral nail fin	#8 x 5/8" long pan head screw	Nominally spaced at 12" on center, and starting 2" from each corner.

**7.0 Test Results:** The temperature during testing was 20.5°C (69°F). The results are tabulated as follows:

**Test Specimen #1:**

Title of Test	Results	Allowed	Note
<b>Air Leakage,</b> Infiltration per ASTM E 283 at 75 Pa (1.57 psf)	<0.1 L/s/m <sup>2</sup> (<0.01 cfm/ft <sup>2</sup> )	1.5 L/s/m <sup>2</sup> (0.3 cfm/ft <sup>2</sup> ) max.	1
<b>Air Leakage,</b> Exfiltration per ASTM E 283 at 75 Pa (1.57 psf)	<0.1 L/s/m <sup>2</sup> (<0.01 cfm/ft <sup>2</sup> )	1.5 L/s/m <sup>2</sup> (0.3 cfm/ft <sup>2</sup> ) max.	1
<b>Canadian Air Infiltration/Exfiltration Level</b>	Fixed	0.2 L/s/m <sup>2</sup> (0.04 cfm/ft <sup>2</sup> ) max.	
<b>Water Penetration,</b> per ASTM E 547	N/A	N/A	3
<b>Uniform Load Deflection,</b> per ASTM E 330	N/A	N/A	3
<b>Uniform Load Structural,</b> per ASTM E 330	N/A	N/A	3
<b>Forced Entry Resistance,</b> per ASTM F 588, Type: D - Grade: 10	Pass	No entry	
<b>Thermoplastic Corner Weld</b>	Pass	Meets as stated	
<b>Optional Performance</b>			
<b>Water Penetration,</b> per ASTM E 547 at 580 Pa (12.11 psf)	Pass	No leakage	
<b>Uniform Load Deflection,</b> per ASTM E 330 Deflections taken at the left jamb +2400 Pa (+50.13 psf) -2400 Pa (-50.13 psf)	0.3 mm (0.01") 0.3 mm (0.01")	1.8 mm (0.07") max. 1.8 mm (0.07") max.	5, 6
<b>Uniform Load Structural,</b> per ASTM E 330 Permanent sets taken at the left jamb. +3600 Pa (+75.19 psf) -3600 Pa (-75.19 psf)	<0.3 mm (<0.01") <0.3 mm (<0.01")	1.0 mm (0.04") max. 1.0 mm (0.04") max.	4, 5

**7.0 Test Results:** (Continued)

**Test Specimen #2:**

Title of Test	Results	Allowed	Note
<b>Optional Performance</b>			
<b>Uniform Load Deflection,</b> per ASTM E 330 Deflections taken at the left jamb +3360 Pa (+70.18 psf) -3360 Pa (-70.18 psf)	0.3 mm (0.01") 0.3 mm (0.01")	1.8 mm (0.07") max. 1.8 mm (0.07") max.	5, 6
<b>Uniform Load Structural,</b> per ASTM E 330 Permanent sets taken at the left jamb. +5040 Pa (+105.26 psf) -5040 Pa (-105.26 psf)	<0.3 mm (<0.01") 0.3 mm (0.01")	1.0 mm (0.04") max. 1.0 mm (0.04") max.	4, 5

*Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.*

*Note 2: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.*

*Note 3: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.*

*Note 4: Loads were held for 10 seconds.*

*Note 5: Tape and film were not used to seal against air leakage during structural testing.*

*Note 6: Loads were held for 52 seconds*





This report is reissued in the name of Climate Guard Manufacturing through written authorization of Deceuninck North America, LLC to whom the original report was rendered. The original Deceuninck North America, LLC Report No. is E1050.01-501-47.

Architectural Testing will service this report for the entire test record retention period. Test records such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Architectural Testing, Inc. for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.



Digitally Signed for: James P. Grippo by Sandy L. DiCaro

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James P. Grippo  
Technician



Digitally Signed by: Lynn George

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Lynn George  
Director- Regional Operations

JPG:sld

Attachments (pages): This report is complete only when all attachments listed are included.

- Appendix-A: Alteration Addendum (1)
- Appendix-B: Location of Air Seal (1)
- Appendix-C: Drawing(s) (5)