



PERFORMANCE TEST REPORT

Rendered to:

WORLDWIDE DOOR COMPONENTS, INC.

**PRODUCTS: PVC and Composite
Door Jamb Material**

Report No: B3162.01-106-31
Report Date: 10/24/11
Expiration Date: 09/27/15

PERFORMANCE TEST REPORT

Rendered to:

WORLDWIDE DOOR COMPONENTS, INC.
5017 North Coolidge Avenue
Tampa, Florida 33614

Report No: B3162.01-106-31
Test Dates: 09/22/11
Through: 09/27/11
Report Date: 10/24/11
Expiration Date: 09/27/15

Products: PVC and Composite Door Jamb Material

Project Summary: Architectural Testing, Inc. was contracted by World Door Components, Inc. to evaluate their PVC and Composite door jamb products for coefficient of linear expansion tests. Testing was performed in accordance with ASTM D 969-08, *Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics*. Two materials were labeled as PVC door jamb w/Top Dado-Left Hand (EF-496-8314) and Primed Composite door jamb w/Top Dado-Left Hand (EF-496-83). Each sample tested nominally measured 2-3/8" long x 3/8" wide x 1/3" thick. Three samples from each product were tested.

Test Methods: The test specimens were evaluated in accordance with ASTM D 969-08, *Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics*. Any deviation from this method is noted in the Test Procedures and/or Test Results section of this report.

Summary of Test Results:

PVC Door Jamb w/Top Dado-Left Hand (EF-496-8314)

Sample Designation	Coefficient of Thermal Expansion/Contraction (mm/mm·°C)
1	4.50 x 10 ⁻⁵
2	4.65 x 10 ⁻⁵
3	4.62 x 10 ⁻⁵

Summary of Test Results: (Continued)

Primed Composite Door Jamb w/Top Dado-Left Hand (EF-496-83)

Sample Designation	Coefficient of Thermal Expansion/Contraction (mm/mm·°C)
1	4.73×10^{-5}
2	4.52×10^{-5}
3	4.64×10^{-5}

Test Results: The results are tabulated as follows:

Coefficient of Linear Thermal Expansion of Plastics per ASTM D 696

Test Procedure: The samples were conditioned for 24 hours at 70 °F ±2 °F and 50% ±5% RH prior to testing. Following the procedure outlined in ASTM D 696-08, the samples were subjected to a cold-hot-cold series of exposure conditions while in a silica tube dilatometer. At equilibrium during each temperature condition, a reading was taken from a 20 x 0.001mm digital indicator for relative expansion/contraction measurements. The temperatures used were -22 °F (-30 °C) and 86 °F (30 °C).

**Nominal Thickness of Samples
PVC and Composite Door Jamb Material**

PVC Door Jamb w/Top Dado-Left Hand (EF-496-8314) 0.331"
Primed Composite Door Jamb w/Top Dado-Left Hand (EF-496-83) 0.343"

Test Results: (Continued)

PVC Door Jamb w/Top Dado-Left Hand

	1		
Length (mm)	60.47		
Temp (°C)	#1 Cold	#2 Hot	#3 Cold
	-30.0	31.0	-30.0
Gage Reading (mm)	6.333	6.500	6.331
ΔT (°C)	(Expansion)		(Contraction)
	61.1		-62.5
ΔL (mm)	0.167	-0.169	
ΔL/ΔT (mm/°C)	2.73E-03	2.70-E03	
α (mm/mm·°C)	4.52E-05	4.47E-05	
CLTE Average (α)	4.50E-05 mm/mm·°C		
Variability Check	1.1 %		

	2		
Length (mm)	60.33		
Temp (°C)	#1 Cold	#2 Hot	#3 Cold
	-30.0	31.3	-31.4
Gage Reading (mm)	6.313	6.485	6.309
ΔT (°C)	(Expansion)		(Contraction)
	61.3		-62.7
ΔL (mm)	0.172	-0.176	
ΔL/ΔT (mm/°C)	2.18E-03	2.81-E03	
α (mm/mm·°C)	4.65E-05	4.65E-05	
CLTE Average (α)	4.65E-05 mm/mm·°C		
Variability Check	0 %		

	3		
Length (mm)	60.44		
Temp (°C)	#1 Cold	#2 Hot	#3 Cold
	-30.0	31.3	-31.4
Gage Reading (mm)	6.330	6.502	6.328
ΔT (°C)	(Expansion)		(Contraction)
	61.3		-62.7
ΔL (mm)	0.172	-0.174	
ΔL/ΔT (mm/°C)	2.81E-03	2.78-E03	
α (mm/mm·°C)	4.64E-05	4.59E-05	
CLTE Average (α)	4.62E-05 mm/mm·°C		
Variability Check	1.1 %		

Test Results: (Continued)

Primed Composite Door Jamb w/Top Dado-Left Hand

	1		
Length (mm)	60.27		
Temp (°C)	#1 Cold	#2 Hot	#3 Cold
	-31.3	31.3	-31.3
Gage Reading (mm)	6.255	6.432	6.252
ΔT (°C)	(Expansion)		(Contraction)
	62.6		-62.6
ΔL (mm)	0.177		-0.180
ΔL/ΔT (mm/°C)	2.83E-03		2.88-E03
α (mm/mm·°C)	4.69E-05		4.77E-05
CLTE Average (α)	4.73E-05 mm/mm·°C		
Variability Check	1.7 %		

	2		
Length (mm)	60.29		
Temp (°C)	#1 Cold	#2 Hot	#3 Cold
	-31.3	31.3	-31.3
Gage Reading (mm)	6.306	6.470	6.293
ΔT (°C)	(Expansion)		(Contraction)
	62.6		-62.6
ΔL (mm)	0.164		-0.177
ΔL/ΔT (mm/°C)	2.62E-03		2.83-E03
α (mm/mm·°C)	4.35E-05		4.69E-05
CLTE Average (α)	4.52E-05 mm/mm·°C		
Variability Check	7.6 %		

	3		
Length (mm)	60.26		
Temp (°C)	#1 Cold	#2 Hot	#3 Cold
	-31.3	31.3	-31.3
Gage Reading (mm)	6.322	6.491	6.310
ΔT (°C)	(Expansion)		(Contraction)
	62.6		-62.6
ΔL (mm)	0.169		-0.181
ΔL/ΔT (mm/°C)	2.70E-03		2.89-E03
α (mm/mm·°C)	4.48E-05		4.80E-05
CLTE Average (α)	4.64E-05 mm/mm·°C		
Variability Check	6.9 %		

Data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period such materials shall be discarded without notice and the service life of this report by Architectural Testing will expire. Results obtained are tested values and were secured by using the designed test methods. 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 specimens tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

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REH:reh/nlb

Attachments (pages) This report is complete only when all attachments listed are included.
Appendix A - Photographs (1)

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	10/24/11	N/A	Original report issue.

APPENDIX A

Photograph



**Photo No. 1 - PVC Door Jamb
w/Top Dado-Left Hand (EF-496-8314)**



**Photo No. 2 - Primed Composite Door Jamb
w/Top Dado-Left Hand (EF-496-83)**