Architectural Testing

NFRC 102-2010 THERMAL PERFORMANCE TEST REPORT

Rendered to:

CORAL ARCHITECTURAL PRODUCTS

SERIES/MODEL: FL300T Aluminum Storefront System

TYPE: Glazed Wall Systems (Site-built)

Summary of Results	
Standardized Thermal Transmittance (U-Factor)	0.39
Unit Size	78-7/8" x 79-1/8" (2004 mm x 2010 mm) (Model Size)
Layer 1	1/4" Clear Tempered
Gap 1	0.44" Gap, Super Spacer Standard (OF-S), Air-Filled*
Layer 2	1/4" AGC Comfort TiAC Low-E (e=0.040*, #3) Tempered

Reference must be made to Report No. A2424.01-116-46, dated 10/15/10 for complete test specimen description and data.

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
fax: 717-764-4129
www.archtest.com

Architectural Testing

NFRC 102-2010 THERMAL PERFORMANCE TEST REPORT

Rendered to:

CORAL ARCHITECTURAL PRODUCTS
3010 Rice Mine Road
Tuscaloosa , Alabama 35406

Report Number:	A2424.01-116-46
Test Date:	10/08/10
Report Date:	10/15/10
Test Record Retention Date:	10/08/14

Test Sample Identification:

Series/Model: FL300T Aluminum Storefront System

Type: Glazed Wall Systems (Site-built)

Overall Size: 78-7/8" x 79-1/8" (2004 mm x 2010 mm) (Model Size)
NFRC Standard Size: 78.7" x 78.7" (2000 mm wide x 2000 mm high)

Test Sample Submitted by: Client

Test Sample Submitted for: 0

Test Procedure: U-factor tests were performed in a Guarded Hot Box in accordance with NFRC 102-2010, *Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems* .

Test Results Summary:

Standardized U-factor (U_{st}): 0.39 Btu/hr·ft^2·F CTS Method

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
fax: 717-764-4129
www.archtest.com

Test Sample Description:

CONSTRUCTION	**Frame**
Size (in.)	78-7/8" x 79-1/8"
Daylight Opening (in.)	36-3/8" x 74-5/8" (x2)
CORNERS	Butt
Fasteners	Screws
Sealant	Yes
MATERIAL	AT (0.25")
Color Exterior	Head and Jambs (White), Center mullion and Sill (Green)
Finish Exterior	Paint
Color Interior	Head and Jambs (White), Center mullion and Sill (Green)
Finish Interior	Paint
GLAZING METHOD	Exterior pocket

Glazing Information:

Layer 1	1/4" Clear Tempered
Gap 1	0.44" Gap, Super Spacer Standard (OF-S), Air-Filled*
Layer 2	1/4" AGC Comfort TiAC Low-E (e=0.040*, #3) Tempered
Gas Fill Method	N/A*

**Stated per Client/Manufacturer*
N/A Non-Applicable
See Description Table Abbreviations

Test Sample Description: (Continued)

COMPONENTS			
	Type	**Quantity**	**Location**
WEATHERSTRIP			
	EPDM compression gasket	1 Row	Interior glazing perimeter
	EPDM wedge gasket	1 Row	Exterior glazing perimeter
HARDWARE			
	Aluminum trim caps	2	Exterior sill
	Aluminum (AT 0.25") sill receptor	1	Sill
DRAINAGE			
	No visible weeps		

Thermal Transmittance (U-factor)

Measured Test Data

Heat Flows

1. Total Measured Input into Metering Box (Q_{total})	1292.56	Btu/hr
2. Surround Panel Heat Flow (Q_{sp})	43.79	Btu/hr
3. Surround Panel Thickness	8.00	inches
4. Surround Panel Conductance	0.0204	Btu/hr·ft^2·F
5. Metering Box Wall Heat Flow (Q_{mb})	3.19	Btu/hr
6. EMF vs Heat Flow Equation (equivalent information)	0.0113*EMF + -0.013	
7. Flanking Loss Heat Flow (Q_{fl})	16.61	Btu/hr
8. Net Specimen Heat Loss (Q_s)	1228.98	Btu/hr

Areas

1. Test Specimen Projected Area (A_s)	43.35	ft^2
2. Test Specimen Interior Total (3-D) Surface Area (A_h)	55.57	ft^2
3. Test Specimen Exterior Total (3-D) Surface Area (A_c)	55.57	ft^2
4. Metering Box Opening Area (A_{mb})	75.11	ft^2
5. Metering Box Baffle Area (A_{b1})	70.84	ft^2
6. Surround Panel Interior Exposed Area (A_{sp})	31.76	ft^2

Test Conditions

1. Average Metering Room Air Temperature (t_h)	69.77	F
2. Average Cold Side Air Temperature (t_c)	-0.41	F
3. Average Guard/Environmental Air Temperature	71.16	F
4. Metering Room Average Relative Humidity	4.10	%
5. Metering Room Maximum Relative Humidity	4.61	%
6. Metering Room Minimum Relative Humidity	3.75	%
7. Measured Cold Side Wind Velocity (Perpendicular Flow)	17.07	mph
8. Measured Static Pressure Difference Across Test Specimen	0.00" ± 0.04"	H_2O

Results

1. Thermal Transmittance of Test Specimen (U_s)	0.40	Btu/hr·ft^2·F
2. Standardized Thermal Transmittance of Test Specimen (U_{st})	0.39	Btu/hr·ft^2·F

Thermal Transmittance (U-factor)

Calculated Test Data

CTS Method

1.	Warm Side Emittance of Glass (e_1)	0.84	
2.	Cold Side Emittance of Glass	0.84	
3.	Warm Side Frame Emittance	0.90	
4.	Cold Side Frame Emittance	0.90	
5.	Warm Side Sash/Panel/Vent Emittance	N/A	
6.	Cold Side Sash/Panel/Vent Emittance	N/A	
7.	Warm Side Baffle Emittance (e_{b1})	0.92	
8.	Equivalent Warm Side Surface Temperature	48.99	F
9.	Equivalent Cold Side Surface Temperature	4.90	F
10.	Warm Side Baffle Surface Temperature	68.37	F
11.	Measured Warm Side Surface Conductance (h_h)	1.36	Btu/hr·ft^2·F
12.	Measured Cold Side Surface Conductance (h_c)	5.34	Btu/hr·ft^2·F
13.	Test Specimen Thermal Conductance (C_s)	0.64	Btu/hr·ft^2·F
14.	Convection Coefficient (K_c)	0.31	Btu/(hr·ft^2·F$^{1.25}$)
15.	Radiative Test Specimen Heat Flow (Q_{r1})	627.39	Btu/hr
16.	Conductive Test Specimen Heat Flow (Q_{c1})	601.59	Btu/hr
17.	Radiative Heat Flux of Test Specimen (q_{r1})	14.47	Btu/hr·ft^2·F
18.	Convective Heat Flux of Test Specimen (q_{c1})	13.88	Btu/hr·ft^2·F
19.	Standardized Warm Side Surface Conductance (h_{sth})	1.20	Btu/hr·ft^2·F
20.	Standardized Cold Side Surface Conductance (h_{stc})	5.28	Btu/hr·ft^2·F
21.	Standardized Thermal Transmittance (U_{st})	0.39	Btu/hr·ft^2·F

Test Duration

1. The environmental systems were started at 19:11 hours, 10/07/10.
2. The test parameters were considered stable for two consecutive four hour test periods from 22:10 hours, 10/07/10 to 06:10 hours, 10/08/10.
3. The thermal performance test results were derived from 02:10 hours, 10/08/10 to 06:10 hours, 10/08/10.

The reported Standardized Thermal Transmittance (Ust) was determined using CTS Method, per Section 8.2(A) of NFRC 102.

Glazing Deflection (in):

	Left Glazing	Right Glazing
Edge Gap Width	0.44	0.44
Estimated center gap width upon receipt of specimen in laboratory (after stabilization)	0.44	0.44
Center gap width at laboratory ambient conditions on day of testing	0.44	0.44
Center gap width at test conditions	0.41	0.41

Glass collapse determined using a digital glass and air space meter

The sample was inspected for the formation of frost or condensation, which may influence the surface temperature measurements. The sample showed no evidence of condensation/frost at the conclusion of the test.

A calibration of the Architectural Testing Inc. 'thermal test chamber' (ICN 000001) in York, Pennsylvania was conducted in May 2010 in accordance with Architectural Testing Inc. calibration procedure.

"This test method does not include procedures to determine the heat flow due to either air movement through the specimen or solar radiation effects. As a consequence, the thermal transmittance results obtained do not reflect performances which may be expected from field installations due to not accounting for solar radiation, air leakage effects, and the thermal bridge effects that may occur due to the specific design and construction of the fenestration system opening. Therefore, it should be recognized that the thermal transmittance results obtained from this test method are for ideal laboratory conditions and should only be used for fenestration product comparisons and as input to thermal performance analyses which also include solar, air leakage and thermal bridge effects."

"Ratings included in this report are for submittal to an NFRC-licensed IA for certification purposes and are not meant to be used for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) are to be used for labeling purposes."

The test sample was installed in a vertical orientation, the exterior of the specimen was exposed to the cold side. The direction of heat transfer was from the interior (warm side) to the exterior (cold side) of the specimen.

ANSI/NCSL Z540-2-1997 type B uncertainty for this test was 1.52%.

Detailed drawings, 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 designated test methods. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Ratings included in this report are for submittal to an NFRC licensed IA for certification purposes and are not meant to be used for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) are to be used for labeling purposes. 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.

Tested By:

Digitally Signed by: Benjamin W. Green

Benjamin W. Green
Technician

Reviewed By:

Digitally Signed by: Shon W. Einsig

Shon W. Einsig
Senior Technician
Individual-In-Responsible-Charge

BWG:ake
A2424.01-116-46

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

- Appendix-A: Description Table Abbreviations (1)
- Appendix-B: CTS Calibration Data (1)
- Appendix-C: Surround Panel Wiring Diagram (1)
- Appendix-D: Baffle Wiring Diagram (1)
- Appendix-E: Drawings (7)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
.01R0	10/15/10	All	Original Report Issue. Work requested by David Welch of Coral Architectural Products

Appendix A: Description Table Abbreviations

CODE	Frame / Sash Types
AI	Aluminum w/ Vinyl Inserts (Caps)
AL	Aluminum
AP	Aluminum w/ Thermal Breaks - Partial
AS	Aluminum w/ Steel Reinforcement
AT	Aluminum w/ Thermal Breaks - All Members (≥ 0.21")
AU	Aluminum Thermally Improved - All Members (0.062" - 0.209")
AV	Aluminum / Vinyl Composite
AW	Aluminum-clad Wood
FG	Fiberglass
PA	ABS Plastic w/ All Members Reinforced
PC	ABS Plastic-clad Aluminum
PF	ABS Plastic w/ Foam-filled Insulation
PH	ABS Plastic w/ Horizontal Members Reinforced
PI	ABS Plastic w/ Reinforcement - Interlock
PL	ABS Plastic
PP	ABS Plastic w/ Reinforcement - Partial
PV	ABS Plastic w/ Vertical Members Reinforced
PW	ABS Plastic-clad Wood
ST	Steel
VA	Vinyl w/ All Members Reinforced
VC	Vinyl-clad Aluminum
VF	Vinyl w/ Foam-filled Insulation
VH	Vinyl w/ Horizontal Members Reinforced
VI	Vinyl w/ Reinforcement - Interlock
VP	Vinyl w/ Reinforcement - Partial
VV	Vinyl w/ Vertical Members Reinforced
VW	Vinyl-clad Wood
VY	Vinyl
WA	Aluminum / Wood composite
WD	Wood
WV	Vinyl / Wood composite
WF	Fiberglass/Wood Combination
WC	Composite/Wood Composite (Shaped vinyl/wood composite members)
CW	Copper Clad Wood
CO	Vinyl/Wood Composite Material

CODE	Spacer Types (See sealant)
A1	Aluminum
A2	Aluminum (Thermally-broken)
A3	Aluminum-reinforced Polymer
A4	Aluminum / Wood
A5	Aluminum-reinforced Butyl (Swiggle)
A6	Aluminum / Foam / Aluminum
A7	Aluminum U-shaped
A8	Aluminum-Butyl (Corrugated) (Duraseal)
ER	EPDM Reinforced Butyl
FG	Fiberglass
GL	Glass
OF	Organic Foam
P1	Duralite
PU	Polyurethane Foam
SU	Stainless Steel, U-shaped
CU	Coated Steel, U-shaped (Intercept)
S2	Steel (Thermally-broken)
S3	Steel / Foam / Steel
S5	Steel-reinforced Butyl
S6	Steel U-channel w/ Thermal Cap
SS	Stainless Steel
CS	Coated Steel
TP	Thermo-plastic
WD	Wood
ZE	Elastomeric Silicone Foam
ZF	Silicone Foam
ZS	Silicone / Steel
N	Not Applicable
TS	Thermo-plastic w/ stainless steel substrate

CODE	Tint Codes
AZ	Azurlite
BL	Blue
BZ	Bronze
CL	Clear
EV	Evergreen
GD	Gold
GR	Green
GY	Gray
LE	Low 'e' Coating
OT	Other (use comment field)
RC	Solar or Reflective Coating
RG	Roller Shades between glazing
RS	Silver (reflective coating)
SF	Suspended Polyester Film
SR	Silver
BG	Blinds between the Glazing
DV	Dynamic Glazing-Variable
DY	Dynamic Glazing-NonVariable

CODE	Gap Fill Codes
AIR	Air
AR2	Argon/Krypton Mixture
AR3	Argon / Krypton / Air
ARG	Argon/Air
CO2	Carbon Dioxide
KRY	Krypton/Air
SF6	Sulfur Hexaflouride
XE2	Xenon/Krypton/Air
XE3	Xenon/Argon/Air
XEN	Xenon/Air
N	Not Applicable

DOOR DETAILS	
N	Not Applicable
CODE	Door Type
EM	Embossed
FL	Flush
LF	Full Lite
LH	1/2 - Lite
LQ	1/4 - Lite
LT	3/4 - Lite
RP	Raised Panel
CODE	Skin
AL	Aluminum
FG	Fiberglass
GS	Galvanized Steel
ST	Steel
WD	Wood
VY	Vinyl
CODE	Panel
FG	Fiberglass
PL	Plastic
WP	Wood - Plywood
WS	Wood - Solid
CODE	Sub-Structure
GS	Galvanized Steel
ST	Steel
WD	Wood
VY	Vinyl
CODE	Core Fill
CH	Cellular - Honeycomb
EP	Expanded Polystyrene
PI	Polyisocyanurate
PU	Polyurethane
WP	Wood - Plywood
WS	Wood - Solid
XP	Extruded Polystyrene

CODE	Spacer Sealant
D	Dual Seal Spacer System
S	Single Seal Spacer System

CODE	Grid Description
N	No Muntins
G	Grids between glass
S	Simulated Divided Lites
T	True Muntins

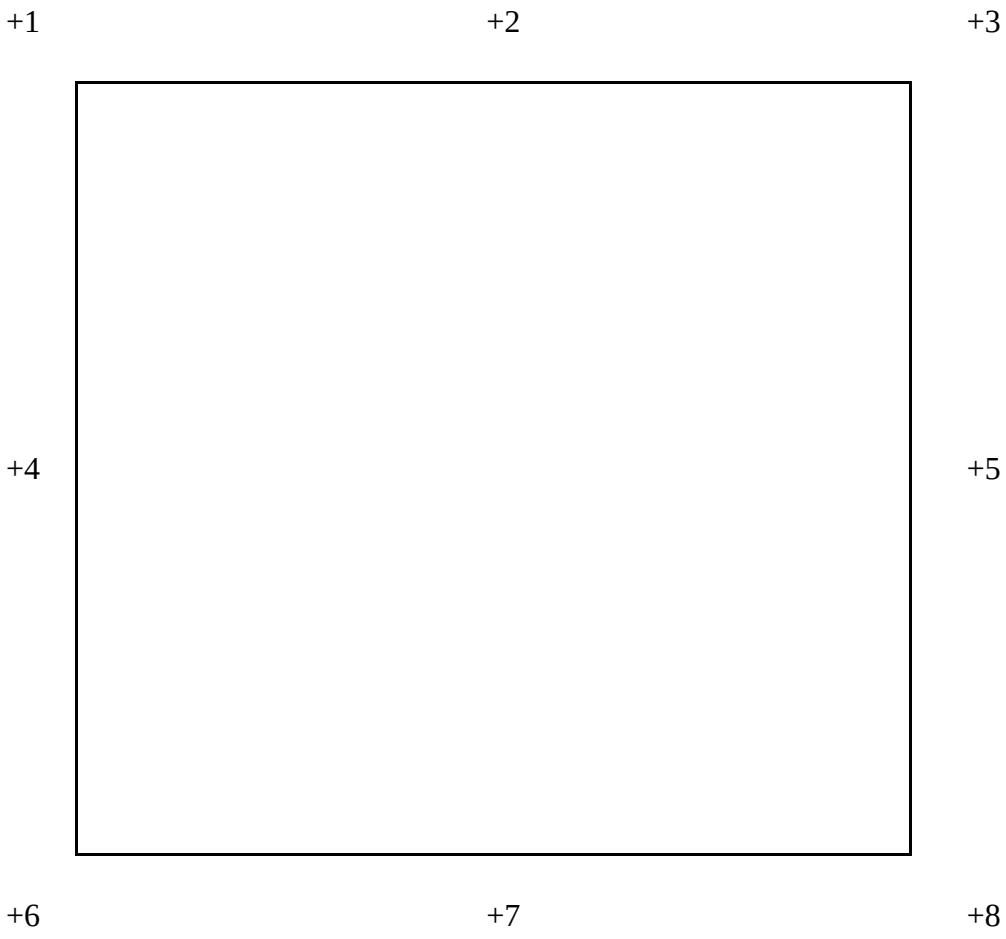
CODE	Grid Size Codes
	Blank for no grids
0.75	Grids < 1"
1.5	Grids >= 1"

CODE	Thermal Breaks
F	Foam
U	Urethane
V	Vinyl
FB	Fiberglass
O	Other
AB	ABS
NE	Neoprene
AI	Air
N	Not Applicable
P	Polyamide

Appendix B: CTS Calibration Data

1.	CTS Test Date	07/06/10	
2.	CTS Size	43.06	ft^2
3.	Glass Conductance	6.93	$Btu/hr \cdot ft^2 \cdot F$
4.	CTS Core Conductance	0.20	$Btu/hr \cdot ft^2 \cdot F$
5.	Warm Side Air Temperature	69.80	F
6.	Cold Side Air Temperature	-0.39	F
7.	Warm Side Average Surface Temperature	54.75	F
8.	Cold Side Average Surface Temperature	3.43	F
9.	Convection Coefficient (K_c)	0.31	$Btu/(hr \cdot ft^2 \cdot F^{1.25})$
10.	Measured Cold Side Surface Conductance (h_c)	5.25	$Btu/hr \cdot ft^2 \cdot F$
11.	Measured Thermal Transmittance	0.29	$Btu/hr \cdot ft^2 \cdot F$

Appendix C: Surround Panel Wiring Diagram



Appendix D: Baffle Wiring Diagram

+1	+2	+3	+4	+5	+6
+7	+8	+9	+10	+11	+12
+13	+14	+15	+16	+17	+18
+19	+20	+21	+22	+23	+24
+25	+26	+27	+28	+29	+30

Appendix E: Submittal Form and Drawings

THERMAL TEST REPORT DRAWINGS FOR FL300T FRAMING SYSTEM

INDEX TO DRAWINGS		
SHEET	1	INDEX TO DRAWINGS
SHEET	2	TYPICAL ELEVATION
SHEET	3	FRAMING DETAILS
SHEET	4	FRAMING DETAILS
SHEET	5	BILL OF MATERIALS

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# A2184.01

Date 10/15/10 Tech BW/SS

ABBREVIATIONS:
D.L.O. = DAY LIGHT OPENING

REV	BY	DATE	DESCRIPTION
---	---	---	---

S:\coral logos\CAP Logo.jpg

THERMAL TEST REPORT DRAWINGS
FOR FL300T FRAMING SYSTEM

INDEX TO DRAWINGS

DATE	9/8/2008		
DRAWN	CHECKED	APPROVED	
RDM	DCW	DCW	
PROJECT NO.	HLT THERMAL TEST		
DRAWING NO.	FL300T_02		
SHEET	1 OF 5		

BILL OF MATERIALS

ITEM NO.	PART #	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1	NG1	GLAZING GASKET EXTERIOR/INTERIOR	.197 SPACE	EPDM	VARIES	EXTERIOR/INTERIOR @ GLASS
2	S83	SETTING BLOCK AT INTERM. HORI/SILL	0.625 X 4.000 X 1.500	EPDM	VARIES	4" LONG
3	FL316T	HEAVY VERTICAL MULLION	2.000 X 4.000 X 0.190	6063-T6 ALUMINUM	VARIES	
4	WD300-1	WATER DEFLECTOR	1.358 X 1.500 X 0.040	INJECT ION MOLDED PLASTIC	CORAL	LOCATE ONE AT EACH END OF EACH ITEM #10
5	CS104T	FLAT FILLER	0.265 X 3.750 X 0.700	6036-T6 ALUMINUM	CORAL	
6	CS300T-1	ANCHOR CLIP	1.295 X 3.73 X 0.094	6063-T6 ALUMINUM	CORAL	4" LONG
7	ED339-1	END DAM	3.313 X 4.813 X 0.063	RIGID PVC	CORAL	
8	FL334T	VERTICAL MULLION/HEAD	2.000 X 4.500 X 0.070	6063-T6 ALUMINUM	CORAL	
9	FL325T	OPEN BACK MULLION FILLER - SHALLOW	0.852 X 3.750 X 0.062	6063-T6 ALUMINUM	CORAL	
10	FL326T	HORIZONTAL MULLION	2.000 X 4.460 X 0.062	6063-T6 ALUMINUM	CORAL	
11	FL303	GLASS STOP	1.207 X 1.543 X 0.050	6063-T6 ALUMINUM	CORAL	
12	FL322T	SILL/HEAD	2.000 X 4.460 X 0.070	6063-T6 ALUMINUM	CORAL	
13	FL339T	SUBSILL FLASHING	2.312 X 4.788 X 0.078	6063-T6 ALUMINUM	CORAL	
14	AS16	SPLINE ASSEMBLY SCREW	#14 X 1" HHSTS	STEEL	VARIES	TYPICAL SPLINE SCREW
15	AS21	ASSEMBLY SCREW	#6 X 1/4" PPH	STEEL	VARIES	
16	FASTENER	FOR ATTACHING FRAME TO STEEL SUBSTRATE	1/4" X 1 1/4" TEK	STEEL	VARIES	
17	795	SEALANT	FILL SPACE	SILICONE	DOW	PERIMETER SEALANT
18	995	SEALANT	FILL SPACE	SILICONE	DOW	INTERNAL SEALANT
19	SM5601	JOINT SEALANT TAPE	1/8" X 1/2" VARIES	BUTYL	SCHNEE-MOREHEAD	USED AT HORIZ. TO VERT. JOINT INTERSECTIONS

GLAZING SCHEDULE

GLASS MARK SYMBOL	GLASS TYPE	MANUFACTURER	MAXIMUM D.L.O. SIZE	MAXIMUM SQUARE FEET
(A)	⅛" TEMPERED OUTER SURFACE, ½" AIR SPACE, ⅛" TEMPERED INNER SURFACE	VARIES	46" x 46"	15.3

Architectural Testing

Test sample complies with these details. Deviations are noted.

Report# A2424.01

Date 10/15/10

S:\coral logos\CAP Logo.jpg

HTL TEST REPORT DRAWINGS FOR FL300T FRAMING SYSTEM

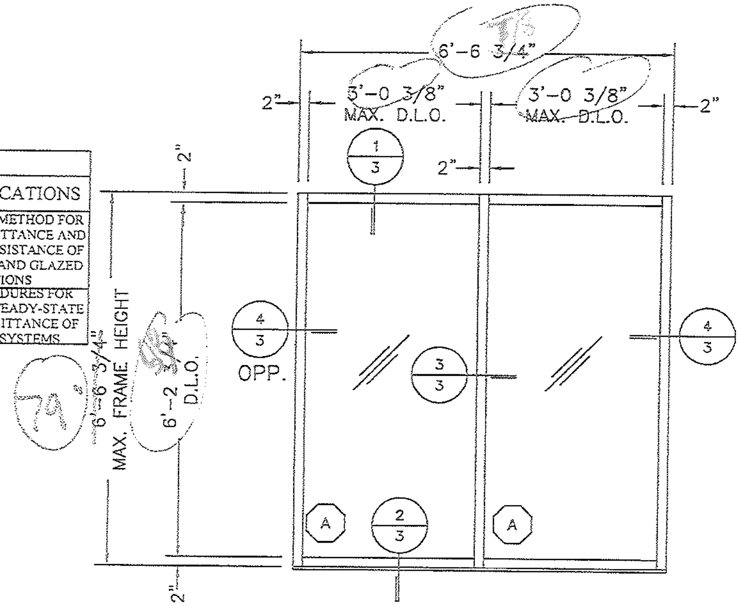
BILL OF MATERIALS

PRODUCT NO. HTL TEST

DRAWING NO. FL300T_02

SHEET 6 OF 6

SPECIMEN #1	
TEST METHOD	TEST SPECIFICATIONS
AAMA 1503-98	VOLUNTARY TEST METHOD FOR THERMAL TRANSMITTANCE AND CONDENSATION RESISTANCE OF WINDOWS, DOORS AND GLAZED WALL SECTIONS
NFRC 102-2004	NFRC TEST PROCEDURES FOR MEASURING THE STEADY-STATE THERMAL TRANSMITTANCE OF FENESTRATION SYSTEMS



E1 - LIGHT ALUMINUM MULLION EXTERIOR GLAZED

STEEL TEST BUCK

SCALE: 1/2"=1'-0"

Architectural Testing

Test sample complies with these details. Deviations are noted.

Report# A2424.01

Date 10/15/10 Tech RWG

THERMAL TEST REPORT DRAWINGS FOR FL300T FRAMING SYSTEM

TYPICAL ELEVATION STANDARD MULLION

S:\coral logos\CAP Logo.jpg

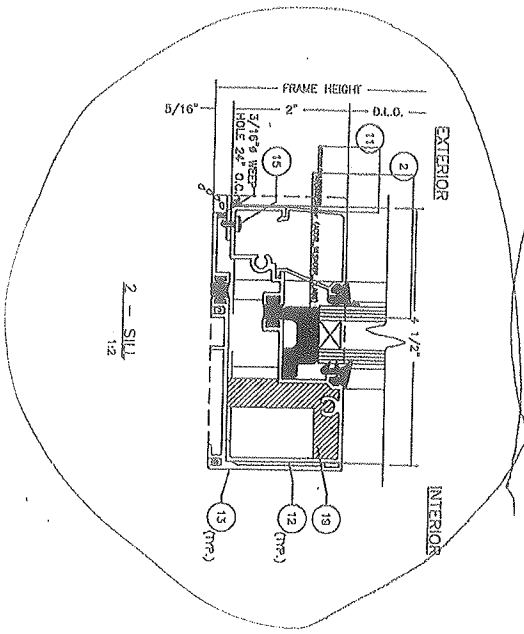
DATE 9/9/2008

DRAWN	CHECKED	APPROVED
RDM	DCW	DCW

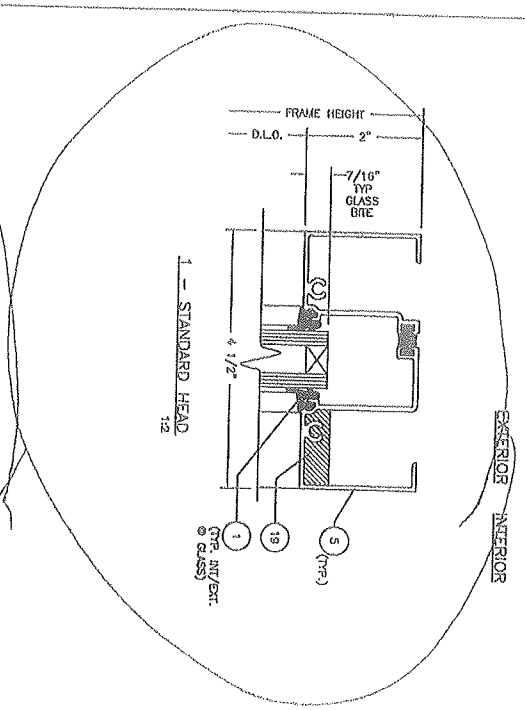
FL300T_02

SHEET 2 OF 5

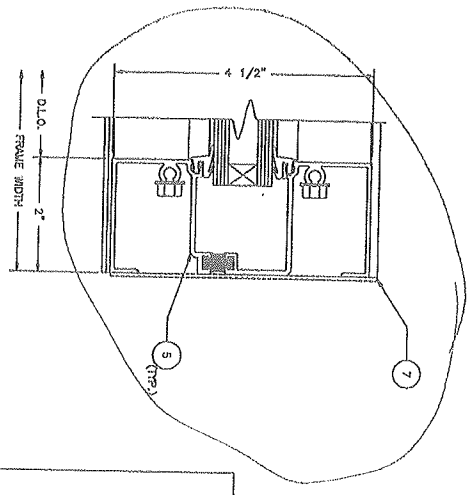
REV | BY | DATE | DESCRIPTION



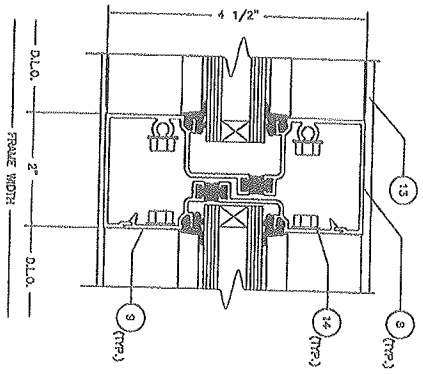
2 — SILL
1:2



1 — STANDARD HEAD
1:2



4 — [illegible]
1:2



3 — INT. VERTICAL MULLION
1:2

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report/# A2424.01

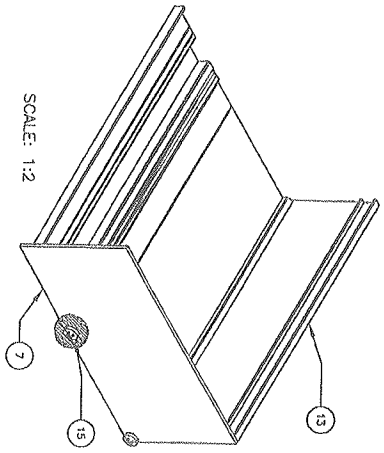
Date: 10/15/10 Tech RWG

SHEET 3 OF 5	FL300T_02	FILE THERMAL TEST	DRAWN RDW	DATE 9/9/2008	THERMAL TEST REPORT DRAWINGS FOR FL300T FRAMING SYSTEM
			CHECKED DLW		FRAMING DETAILS
			APPROVED DLW		S:\carol logos\CAP Logo.jpg

REV	BY	DATE	DESCRIPTION

TYPICAL END DAM AT FLASHING

SCALE: 1:2



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# A9424.01

Date 10/15/10 Tech BW

SHEET 4 OF 5	DRAWING NO. FL300T_02	DRAWN ROM	DATE 9/9/2008
		CHECKED DCW	
		APPROVED DCW	

THERMAL TEST REPORT DRAWINGS
FOR FL300T FRAMING SYSTEM

FRAMING DETAILS

S:\coral logos\CAP Logo.jpg

REV	BY	DATE	DESCRIPTION

Edgetech

BETWEEN YOU AND THE ELEMENTS.

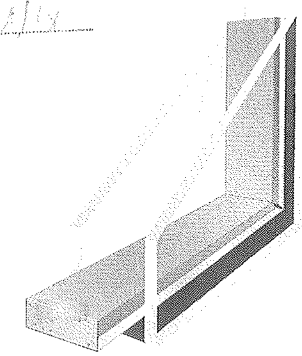
Standard

Technical Specification

Architectural Testing

Test sample complies with these details.
Deviations are noted.
Report # [illegible]
Date [illegible]

Super Spacer®



Super Spacer Standard is a flexible, organic foam spacer product that provides excellent perimeter insulation for sealed glazing units. Desiccant-filled with pre-applied side adhesive, the structural foam spacer significantly simplifies insulating glass production. Featuring a vapour barrier backing, the product must be used in combination with conventional IG sealants such as hot melt butyl, polyurethane or solvent-free polysulfide. Dual seal equivalent sealants may also be used (reference IG sealants Technical Bulletin RD0018).

Characteristics	Norm	Specification / Typical Value
Composition:	—	Foam EPDM (Ethylene Propylene Diene Monomer) base with desiccant pre-fill
Performance Characteristics: Thermal conductivity Colours Gas / Moisture vapour barrier Primary structural seal	 ASTM C518 — ASTM F1249 ASTM D3985	 0.162 W/mK Light Grey, Medium Grey, Black WVTR < 0.020 gm/m²/day Oxygen < 0.009 cc/m²/day Acrylic adhesive
Physical Characteristics: Density Specific Gravity Hardness	 ASTM D1056 ASTM D1056 ASTM D2240	 50 - 65 pcf 0.800 - 1.041 g/cm³ 88 shore 00
Dimensions:	—	Reference attached table
Desiccant fill	—	40% by weight
Intermittent temperature range	—	-40°C to 121°C / -40°F to 250°F
Compatible secondary sealants	—	HMB, PU, PS, DSE (Curable HMB) Reference IG sealants Technical Bulletin RD0018
Fogging	EN 1279 - 6 ASTM 774 HIGS 2190 CGSB 12.8	No fog in visual area No fog in visual area No fog in visual area No fog in visual area
Gas Retention	EN 1279 - 3	Pass
I.G. Durability	EN 1279 - 2 ASTM 773 CGSB 12.8	Pass Pass Pass

Edgetech

BETWEEN YOU AND THE ELEMENTS.

Standard

Technical Specification

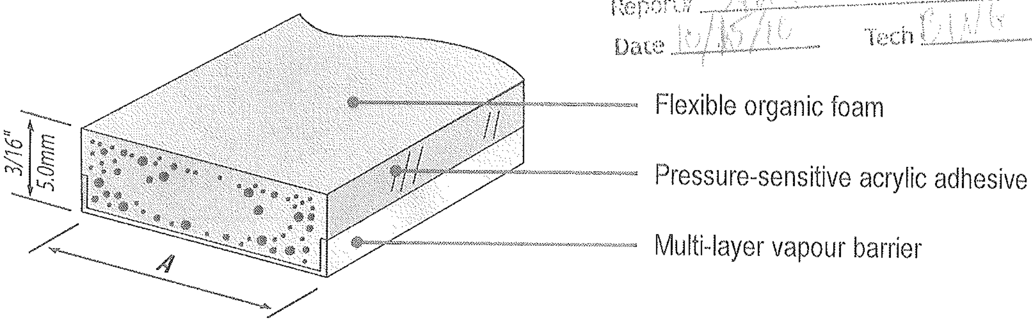
Super Spacer®

Architectural Testing

Test sample complies with these details. Deviations are noted.

Report# A2424.01

Date 10/15/10 Tech CWG



(A) Width mm	(A) Width inches	Meter/ Reel 3.281	Feet/ Reel	Meter/ Auto Reel	Feet/ Auto Reel
4.8	3/16	610	2000	N/A	N/A
6.4	1/4	457	1500	1372	4500
7.9	5/16	335	1100	1006	3300
9.5	3/8	305	1000	914	3000
11.1	7/16	274	900	823	2700
11.9	15/32	244	800	731	2400
12.7	1/2	244	800	731	2400
14.3	9/16	213	700	640	2100
15.9	5/8	206	675	617	2025
17.5	11/16	183	600	549	1800
19.1	3/4	175	575	526	1725
20	0.798	152	500	457	1500

Spacer Sizes

Super Spacer Standard is available in a standard 5mm (3/16") thickness and a full range of spacer widths from 4.8mm (3/16") to 20mm (.798").

Continuous Packaged Length

For regular insulating-glass production, Super Spacer Standard is supplied on reels with the continuous packaged length varying depending on the spacer width.

Protective Packaging

To provide desiccant protection, the reels are sealed in moisture-proof foil bags and then packaged in high-density polyethylene bags. These double-packaged reels are then shipped in recyclable cardboard boxes.

Desiccant Systems

Over 40% by spacer weight is desiccant material, and the low-deflection blend primarily consists of 3A molecular-sieve material.