



NATIONAL CERTIFIED TESTING LABORATORIES

8350 PARKLINE BLVD. STE. 12 • ORLANDO, FLORIDA 32809 • TELEPHONE (407) 240-1356
FAX (407) 240-8882
www.nctlinc.com

Florida Building Code TAS 202-94
Florida Building Code TAS 203-94

STRUCTURAL & CYCLING PERFORMANCE TEST REPORT

NCTL-210-3961-01

MP Global Products
34020 James J Pompo
Fraser, MI 48026

REPORT NUMBER: NCTL-210-3961-01

REPORT DATE: 05/23/2014

MODEL: "Zip Up Underdeck® System"


05/30/14



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Report Number NCTL-210-3961-01
Report Date 05/23/14
Report To MP Global Products
34020 James J Pompo
Fraser, MI 48026
Reception Date 05/19/2014
Test Date 05/19/2014
Test End 05/19/2014

Specification: Florida Building Code TAS 202-94, "Criteria for Testing Impact and Non-Impact Resistant Building Envelope Components using Uniform Static Air Pressure." (Negative Only)

Florida Building Code TAS 203-94, "Criteria for Testing Products Subjected to Cyclic Pressure Loading." (Negative Only)

Description of Sample Tested

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

Model Type: "Zip Up Underdeck® System"
Configuration: "X"
Frame Size 100.0" x 60.0"
Panel size (2) Fixed: 5.5" x 99.625"
(4) Fixed: 12.1" x 99.625"
Frame Type: Vinyl (PVC)
Frame Description
Type Wall trim (edge component) (Item # 2) by "MP Global"
Size 0.984" x 2.087" x 0.040"
Location Head and sill

Type Wall trim (edge component) (Item # 9) by "MP Global"
Size 0.984" x 2.087" x 0.040"
Location Jamb

Type Main rail (structure component) (Item # 4) by "MP Global"
Size 1.398" x 1.869" x 0.040"
Location Horizontal rail running the width of the specimen and located from the head at approximately 5.5" and approximately 12.25" on center thereafter. The rail was secured each steel "Purlin" using (2) # 12 x 1.25" hex head self tapping screws. The screw ran through both the main rail and the "Z Channel" (Item # 10).

Frame Description (Cont.)

Type "Z Channel" (stiffener component) (Item # 10) by "MP Global"
Size 0.750" x 1.776" x 0.125"
Location Located on top and bottom of each main rail and secured to the main rail using 1/4-20 x 1.25" bolt with washer and nut combination. The bolt, washer and nut combinations were located through each main rail at approximately 2.50" from each jamb and approximately 12.0" on center thereafter.

Type L-shaped "PVC" angle (Item #15)
Size 1.125" x 1.125" x 0.250"
Location Located on head and sill and secured using #8 x 1.0" grip-rite screw and washer combinations. (10) screw and washer combinations were located on the head and sill at approximately 2.5" & 5.0" from each end and approximately 12.0" on center thereafter.

Panel Description

Type Panel (finish component) (Item # 3) by "MP Global"
Size 12.126" x 0.323" x 0.040"
Location Center panels only. The panels were secured inside the main rail using a silicone sealant.

Type Panel (finish component) by "MP Global"
Size 5.5" x 0.323" x 0.040"
Location Top and bottom panels only. The panels were secured inside the main rail using a silicone sealant. "Pop Rivets" were located through the wall trim and panels. (10) were located on the head and sill at approximately 2.5" and 5.0" from each end and approximately 12.0" on center thereafter.

Interior/ Exterior Surface Finish

Vinyl (PVC)

Sealant: G.E. 100% clear exterior grade silicone (Item #8) was used between all wall joints and bead channels.

Insect Screen: A custom screen was employed on each specimen

Test Buck: The specimen was installed into a 2.0" x 12.0" wood test buck that employed (3) "Z" shaped steel purlins and (1) "C" shaped steel purlin. The "Z" shaped purlins had an overall measurement of 5.625" wide x 8.0" deep x 0.125" thick. The "C" shaped purlin had an overall measurement of 5.625" wide x 8.0" deep x 0.125" thick. The purlins were held to the wood test buck using bolt, washer and nut combinations and steel "L" shaped clips that had an overall measurement of 5.75" wide x 7.0" high and 3.0" deep.

Installation: As noted is the frame description.



05/30/14

Test Results - TAS 202

Test Method Test
 ASTM E330 Static Air Pressure Tests
 [Specimen # 1]

Half Test Load – 55.0 psf

Negative = No damage

Design Loads – 73.3 psf

Mid-Span between purlins on main rail

Measured Deflection Negative = 0.192 inches

Mid-Span between purlins and main rails on panel

Measured Deflection Negative = 0.679 inches

Test Loads – 110.0 psf

Mid-Span between purlins on main rail

Measured Permanent Set Negative = 0.001 inches

Mid-Span between purlins and main rails on panel

Measured Permanent Set Negative = 0.004 inches

Upon completion of testing there was no structural distress indicative of failure

Test Results - TAS 203

Test **Cyclic Wind Pressure Loading**

After completion of the impact tests, the test specimens were pressure cycled in accordance with TAS 203.

Specimen # 2, 3 & 4

Maximum Cyclic Load Test Pressure: -73.3 psf

<u>Negative Loads</u>	<u>Actual</u>	<u># of Cycles</u>
<u>Range of Test</u> +0.0 to +0.5 DP	0.00 psf to 36.65 psf	600
+0.0 to +0.6 DP	0.00 psf to 43.98 psf	70
+0.0 to +1.3 DP	0.00 psf to 95.29 psf	1

Note: Specimens showed no resultant failure distress or permanent deformation with a recovery of at least 90% over maximum deflection after cycle test. No failure of fasteners or separation of glass from the frame.

Note: Cycles Per Minute 40

Note: A 2 mil Polyethylene film was used on the cycle tests and it is the opinion of the Undersigned that it had no influence on the results of these tests.

[Handwritten signature]
 05/30/14

Sampling: The sampling of the product(s) in this test report was accomplished by the client in accordance with the specification(s) the sample was tested to.

Drawings 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. 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. Testing was performed at the National Certified Testing Laboratory Orlando Florida (NCTL).

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 may not be reproduced, except in full, without the written consent of NCTL.

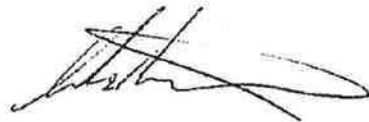
Test Observers

Name: Mr. Miguel Nieves	NCTL
Name: Mr. Mark Bennett	NCTL
Name: Mr. Christopher Bennett	NCTL
Name: Mr. Van Connors	MP Global Products
Name: Mr. Gerard Ferrara	PE

National Certified Testing Laboratories



Mark Bennett
Manager of Testing Services



Christopher Bennett
Division Manager

MTS Initials: _____ / Admin. initials: _____

Attachments

DC Notification No:

NCTL Certification No.: 11-0726.01

Gerard J. Ferrara, P.E.
Florida Registration No. 11985
Certificate of Authorization No. 2529
2795 Magnolia Road
Deland, Florida 32720
(386) 734-8792 - PHONE



APPENDIX A

Section 1:

Component Drawings, with Applicable Part Numbers, Manufacturing and Modeling Details, were reviewed (as submitted) for Product Verification (Reference: NCTL-210-3961-01)

See Attached Documentation;
any deviations noted.

Note: The above referenced component drawings along with 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.

Section 2:

<u>Identification</u>	<u>Date</u>	<u>Page & Revision</u>
Original Issue	05/23/14	Not Applicable



Handwritten signature and date: 05/30/14

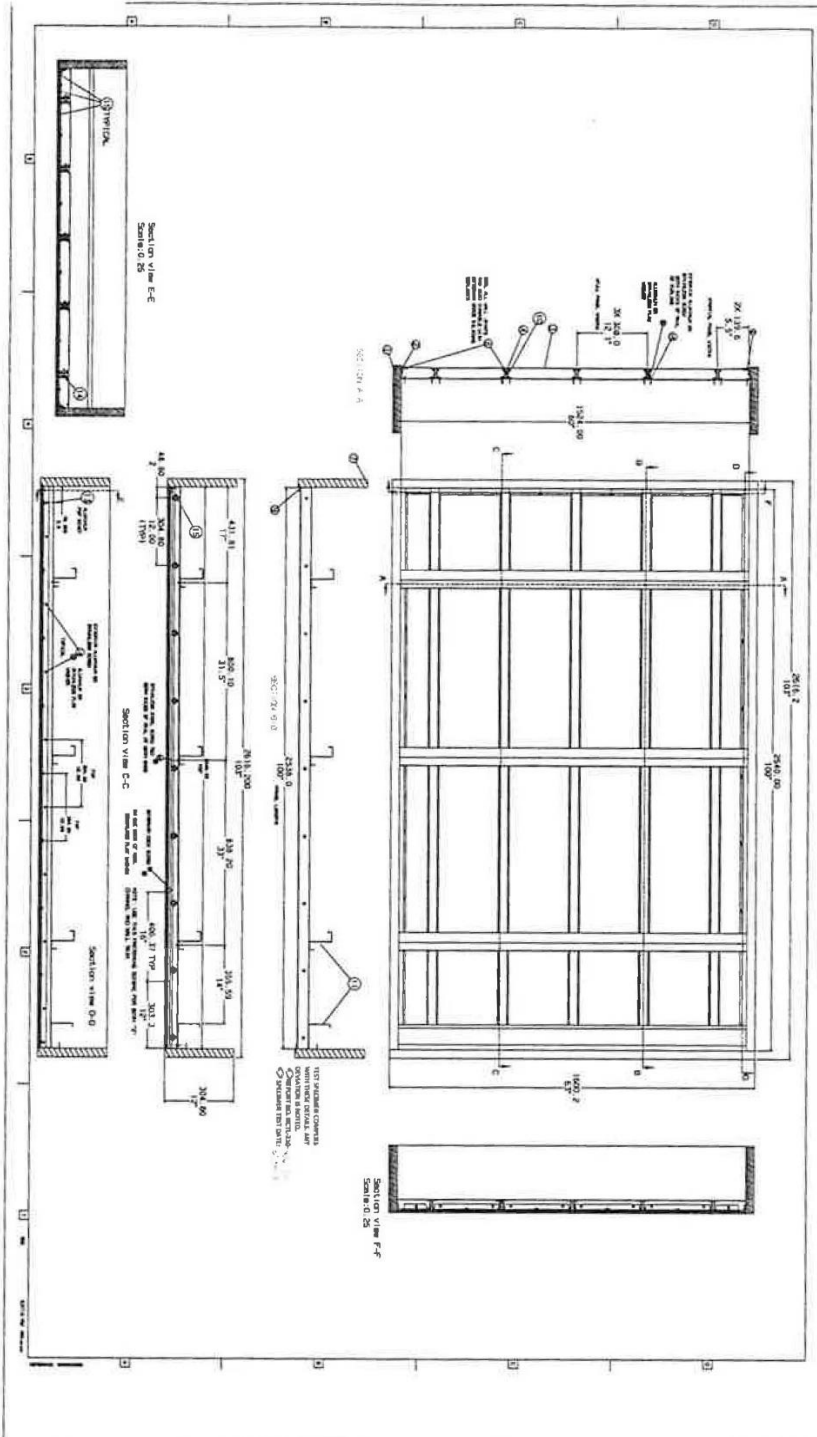


MP Global Products

STRUCTURAL PERFORMANCE TEST

NCTL-210-3961 -01

NATIONAL CERTIFIED TESTING LABORATORIES



ITEM	PART NAME	QUANTITY	DESCRIPTION	MANUFACTURER	NOTES
1	GLASS PANE	2	3" x 6" x 8"	USA	SEE FINISH LAYER
2	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
3	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
4	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
5	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
6	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
7	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
8	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
9	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
10	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
11	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
12	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
13	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
14	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
15	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
16	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
17	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
18	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
19	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
20	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK

ITEM	PART NAME	QUANTITY	DESCRIPTION	MANUFACTURER	NOTES
1	GLASS PANE	2	3" x 6" x 8"	USA	SEE FINISH LAYER
2	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
3	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
4	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
5	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
6	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
7	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
8	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
9	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
10	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
11	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
12	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
13	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
14	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
15	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
16	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
17	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
18	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
19	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK
20	WALL TIE	2	FOR CONCRETE	USA	1/2" DIA. x 1/4" THICK



Quality Assurance Manual
Material Specifications



STEEL BUILDINGS Inc

Panel Material Gauge	Design Thickness	Order Thickness	Minimum Uncoated Thickness	Minimum Coated Thickness (AZ55 Bare)	Minimum Coated Thickness (AZ55 Ptd)	Minimum Coated Thickness (AZ50 Ptd)	Minimum Coated Thickness (G90 Ptd)	Minimum Coated Thickness (G90 Bare)
29 Gauge	0.0131	0.0124	0.0124	0.0142	0.0157	0.0155	0.0149	0.0161
26 Gauge	0.017	0.0162	0.0162	0.0180	0.0195	0.0193	0.0187	0.0192
26 Gauge	0.0176	0.0167	0.0167	0.0185	0.0200	0.0198	0.0192	0.0197
24 Gauge	0.0223	0.0212	0.0212	0.0230	0.0245	0.0243	0.0237	0.0242
22 Gauge	0.0286	0.0272	0.0272	0.0290	0.0305	0.0303	0.0297	0.0302

SuperSpan 1 on 7

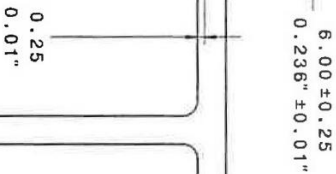
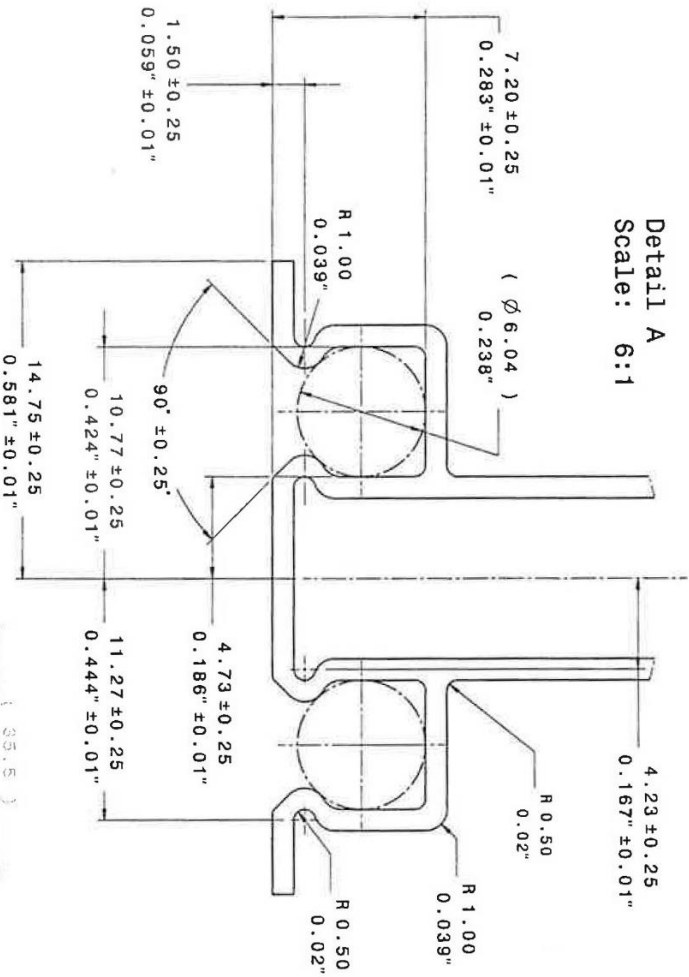
Hot Tensile Material Gauge	Design Thickness	Order Thickness	Minimum Uncoated Thickness	Minimum Coated Thickness (Painted)	Minimum Coated Thickness (Galvanized)
16	0.0589	0.056	0.056	0.057	0.058
14	0.0705	0.067	0.067	0.068	0.069
13	0.085	0.081	0.081	0.082	0.083
12	0.105	0.100	0.100	0.101	0.102

Flange Material	Design Thickness	Order Thickness 5" & 6" wide	Order Thickness 8" wide	Order Thickness width > 8"
3/16"	0.1875	0.1815		
1/4"	0.25	0.24	0.24	
5/16"	0.3125	0.2975	0.2965	0.3025
3/8"	0.375	0.365	0.359	0.365
1/2"	0.5	0.490	0.484	0.490
5/8"	0.625	0.615	0.600	0.615
3/4"	0.75	0.740	0.725	0.740
1"	1	0.990	0.975	0.990

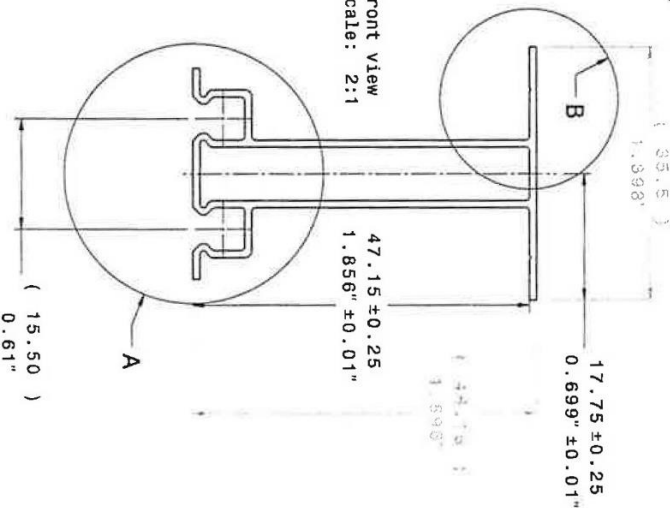
Web Material	Design Thickness	Order Thickness	Minimum Thickness
10 gauge	0.1345	0.1285	0.1285
8 gauge	0.1644	0.1584	0.1584
3/16"	0.1875	0.1815	0.1815
1/4"	0.25	0.240	0.240
5/16"	0.3125	0.3025	0.3025
3/8"	0.375	0.365	0.365
1/2"	0.5	0.490	0.490

TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
REPORT NO. NCTL-210-
SPECIMEN TEST DATE:

Detail A
Scale: 6:1



Front View
Scale: 2:1



Detail B
Scale: 8:1

DATE	QNG	DRW	CHG	REV	ZONE	REVISION HISTORY	AUTH	DR	APP'D	
02/28/10	Y	Y	A	A	--	PRODUCTION RELEASE	03/20/10	RM	PM	LM

NOTE:
1mm. / 0.04in. MIN. THICKNESS
UNLESS OTHERWISE SPECIFIED, ALL INSIDE RADII MIN. 0.25 MM.
MASS FROM MATH DATA: 0.74kg FOR 1 ft.
PART CUT LENGTHS SPECIFIED ON PURCHASE ORDERS.
* DENOTES INTERIOR OR EXTERIOR.
** DENOTES PART CUT LENGTH IN FT.
*** DENOTES PART COLOR.
PROFILE STRAIGHTNESS, FLATNESS AND PERPENDICULARITY DEFINED AS A CRITICAL CHARACTERISTIC.

TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
REPORT NO. NCLT-210-081
SPECIMEN TEST DATE: 08/05/10

UNLESS OTHERWISE SPECIFIED
PERFECT FORM REQUIRED FOR FEATURES OF SIZE AT MMC. TRUE POSITION TOLERANCES AND RELATED DATUMS APPLY AT CONDITION OF SIZE INDICATED IN FEATURE CONTROL FRAME. ALL OTHER GEOMETRIC TOLERANCES AND POSITION CALLOUTS MAY BE OBTAINED SEPARATELY. REGARDLESS OF DATUM REFERENCE.

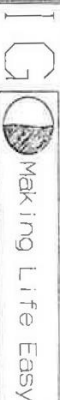
ALL DIMENSIONS ARE IN MILLIMETERS
UNLESS OTHERWISE SPECIFIED

ANGLES ± 0.5 DEGREE

REFERENCE: U-08-PN-200-WHT
U-08-VT-200-WHT
U-12-ST-200-WHT

FIRST USED:

THIRD ANGLE PROJECTION
DO NOT SCALE
USE MATH DATA



17163 PARK LAKE, FRASER, MI 48026 USA

DR R. N. MALEY DATE 02/28/10

APPROV. P. J. MALEY

APPROV. L. R. MALEY

APPROV.

APPROV.

MATERIAL

RPVC

Part Weight: 0.164 Lb. (0.074 Kg.)
0.074 Kg. (0.164 Lb.)

DRAWING TYPE

MAIN RAIL (NO FINISH)

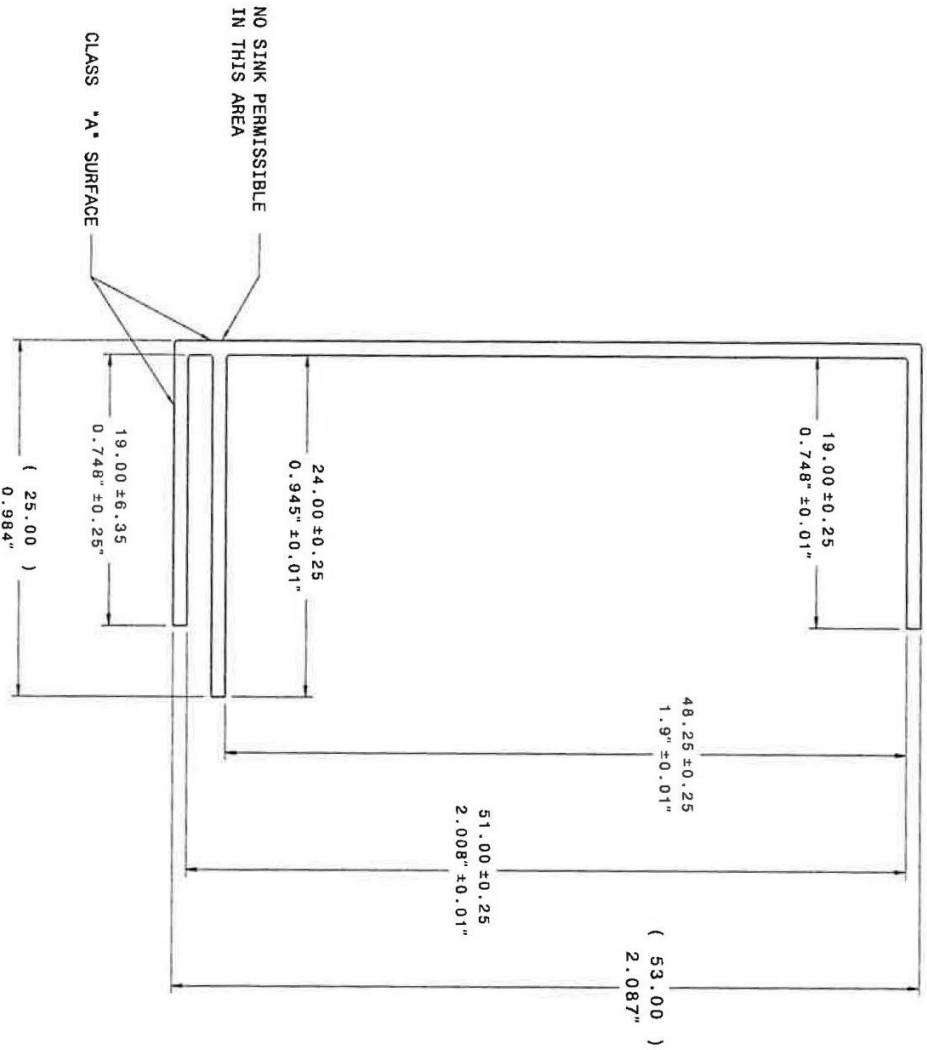
DRAWING NUMBER

U-08-MR-200-WHT

SIZE SCALE FRAME NO SHEET NO DWG REV TMR

FULL 1 OF 1 1 OF 1 A A

TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED.
 REPORT NO. NCLT-210-309404
 SPECIMEN TEST DATE: 02/28/10



Front view
 Scale: 4:1

DATE	CRD	DRW	CHK	REV	ZONE	REVISION HISTORY	AUTH	DR	APP'D	CHK'D
02/28/10	Y	Y	A	A	---	PRODUCTION RELEASE	03/01/10	RM	PM	LM

NOTE:

- 1mm. / 0.04in. MIN. THICKNESS UNLESS OTHERWISE SPECIFIED, ALL INSIDE RADIUS MIN. 0.25 MM.
- MASS FROM MATH DATA: 0.049kg FOR 1 ft.
- PART CUT LENGTHS SPECIFIED ON PURCHASE ORDERS.
- * DENOTES INTERIOR OR EXTERIOR.
- ** DENOTES PART CUT LENGTH IN FT.
- *** DENOTES PART COLOR.
- PROFILE STRAIGHTNESS, FLATNESS AND PERPENDICULARITY DEFINED AS A CRITICAL CHARACTERISTIC.
- CLASS "A" SURFACE DEFINED AS CRITICAL TO AESTHETICS.

UNLESS OTHERWISE SPECIFIED

PERFECT FORM REQUIRED FOR FEATURES OF SIZE AT MMC. TRUE POSITION TO ERANGES AND RELATED DATUMS APPLY AT CONDITION OF SIZE INDICATED IN FEATURE CONTROL FRAME. ALL OTHER GEOMETRIC TOLERANCES AND RELATED DATUMS APPLY AS SEPARATE TRUE POSITION AND POSITIONAL TOLERANCES. SEPARATE TOLERANCES REQUIREMENTS OF DATUM REFERENCE.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED

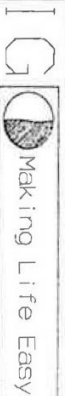
ANGLES ±0.5 DEGREE

REFERENCE U-08-FN-200-WHT
 U-08-MR-200-WHT
 U-12-ST-200-WHT

FIRST USED:



THIRD ANGLE PROJECTION
 DO NOT SCALE
 USE MATH DATA



Making Life Easy
 Creative Solutions Inc.

17153 PARK LANE, FAYERS, HI 48026 USA

DR: R. N. MALEY DATE: 02/28/10

APP01: P. J. MALEY

APP02: E. R. MALEY

APP03: [blank]

APP04: [blank]

APP05: [blank]

MATERIAL: RPVC

Part weight: 0.108 lb. (per ft.)
 0.049 kg (per ft.)

DRAWING NAME: WALL TRIM (NO FINISH)

DRAWING NUMBER: U-08-WT-200-WHT

SCALE: FULL

FRAME NO: 1 OF 1

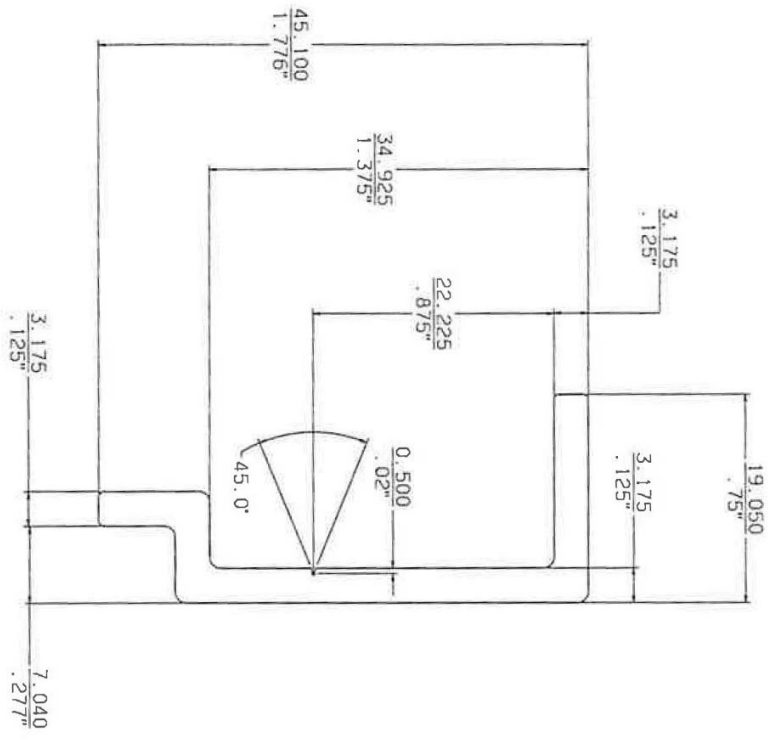
SHEET NO: 1 OF 1

DWG REV: A

DATE: A

DATE	CD	DR	DC	REV	ZONE	REVISION HISTORY	AUTH	DR	APND	APND
03/26/14	Y	Y	A	A		PRODUCTION RELEASE	03/26/14	RM	PM	LM

TOP SURFACE DIMENSIONS
WITH THESE DETAILS, ANY
DIMENSIONS IN PARENT
DRAWING IS NOT TO BE
SPECIFIED DATE: 03/26/14



FRONT VIEW
Scale: 5

- UNLESS OTHERWISE SPECIFIED:
- 1- PERFECT FORM REQUIRED FOR FEATURES OF SIZE AT MMC.
 - 2- TIE POSITION TOLERANCES AND RELATED DATUMS APPLY AT CONDITION OF SIZE INDICATED IN FEATURE CONTROL FRAME.
 - 3- ALL OTHER GEOMETRIC TOLERANCES AND RELATED DATUMS APPLY RESPECTIVELY TO THE FEATURE UNLESS OTHERWISE SPECIFIED.
 - 4- SEPARATE TIE POSITION CALCULATIONS MAY BE GIVEN SEPARATELY REGARDLESS OF DATUM REFERENCE.
 - 5- MINIMUM THICKNESS 3.175MM
 - 6- INSIDE RADIUS 0.25MM
- NOTES:
- 1- WEIGHT FROM MATH DATA: 0.049KG PER PART.
 - 2- PART CUT LENGTHS TO BE SPECIFIED BY PURCHASER ORDER.
 - 3- PART MUST BE FLAT ACROSS ENTIRE WIDTH AND LENGTH. PROFILE STRAIGHTNESS, FLATNESS AND PERPENDICULARITY DEFINED AS A CRITICAL CHARACTERISTIC.

REFERENCE:

IG CREATIVE SOLUTIONS, INC.

APPROVED: P. J. MALEY
L. R. MALEY

DATE: 25 MAR 2014
ZCH-08-25-1 0"-14" INO FINISH

DATE: 25 MAR 2014
ZCH-08-25-1 0"-14" INO FINISH

DATE: 25 MAR 2014
ZCH-08-25-1 0"-14" INO FINISH

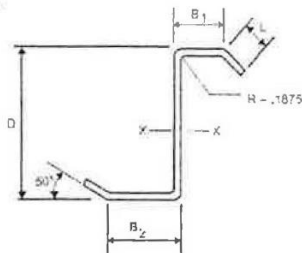


Chapter 1
Section 9 Fabrication (Continued)

9.9.7.7 Zee Shapes

TEST SPECIMEN COMPLIES
WITH THESE DETAILS. ANY
DEVIATION IS NOTED.

REPORT NO. NCTL-210- 3961-01
SPECIMEN TEST DATE: 05/19/14



Nominal Size	Actual Size	D	B1	B2	L (nom)	Blank Width
3 x 1 1/2	3 x 1 1/2 x 1 1/2	3	1 1/2	1 1/2	15/16	6 15/16
4 x 2	4 x 2 x 2	4	2	2	15/16	8 15/16
4 x 2 1/2	4 x 2 1/8 x 2 3/8	4	2 1/8	2 3/8	15/16	9 15/16
6 x 2 1/2	6 x 2 1/8 x 2 3/8	6	2 1/8	2 3/8	15/16	11 15/16
8 x 2 1/2	8 x 2 1/8 x 2 3/8	8	2 1/8	2 3/8	15/16	13 15/16
8 x 3 1/2	8 x 3 1/8 x 3 3/8	8	3 1/8	3 3/8	15/16	15 15/16
10 x 2 1/2	10 x 2 1/8 x 2 3/8	10	2 1/8	2 3/8	15/16	15 15/16
10 x 3 1/2	10 x 3 1/8 x 3 3/8	10	3 1/8	3 3/8	15/16	17 15/16
12 x 2 1/2	12 x 2 1/8 x 2 3/8	12	2 1/8	2 3/8	15/16	17 15/16
12 x 3 1/2	12 x 3 1/8 x 3 3/8	12	3 1/8	3 3/8	15/16	19 15/16

Lip dimensions are nominal and vary accordingly with the material thickness see page QC1-39 for actual lip sizes and tolerances