

VTECH INDUSTRIES TEST REPORT

SCOPE OF WORK STRUCTURAL TESTING ON UNIT SKYLIGHT

REPORT NUMBER J9818.02-801-44 R0

TEST DATE 10/08/19

ISSUE DATE 11/06/19

RECORD RETENTION END DATE 10/08/23

PAGES

13

DOCUMENT CONTROL NUMBER

ATI 00479 (07/24/17) RT-R-AMER-Test-2805 © 2017 INTERTEK





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Report No.: J9818.02-801-44 R0 Date: 11/06/19

REPORT ISSUED TO

VTECH INDUSTRIES

5534 Harvey Wilson Drive Houston, TX 77020

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by VTECH Industries to perform structural testing on their 4 x 4 Unit Skylight. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at Intertek Building and Construction test facility in Plano, TX.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
Uniform Design Load Structural Test Pressure	±11,970 Pa (±250.00 psf)
Uniform Over Load Structural Test Pressure	±14,364 Pa (±300.00 psf)
ICC-500 Missile Impact	100 mph Pass

For INTERTEK B&C:

COMPLETED BY:	Fred Muñoz	REVIEWED BY:	Andy Cost
TITLE:	Project Manager	TITLE:	Lab Manager
SIGNATURE:		SIGNATURE:	
DATE:	11/06/19	DATE:	11/06/19
LFM: cm/ac			

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TEST REPORT FOR VTECH INDUSTRIES

Report No.: J9818.02-801-44 R0 Date: 11/06/19

SECTION 3

TEST METHODS

The specimens were evaluated in accordance with the following:

ASTM E330/E330M-14, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

ICC 500-2014, *ICC/NSSA Standard for the Design and Construction of Strom Shelters; Section 806: Pressure Testing Procedures*

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimen was secured to a 2 x 12 pine curb using both elevator bolts and sealant. Bolts used were 5/16" x 2-1/2" flat head elevator bolts, located along the sides of the curb mount 3" from each corner with 11" on center spacing thereafter. Sealant was applied full perimeter along curb top face and side faces beneath frame.

LOCATION	ANCHOR DESCRIPTION	ANCHOR LOCATION
Pine Curb (Buck)	5/16" x 2-1/2" flat head elevator bolts	(5) anchors at 11" on center across each of the 51-1/2" side panels

SECTION 5

EQUIPMENT

Calibration of test equipment was performed by Intertek B&C in accordance with AAMA 205-01 "In-Plant Testing Guidelines for Manufacturers and Independent Laboratories"

SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY	
Art Valentz	VTECH Industries, LLC.	
Fred Muñoz	Intertek B&C	



Total Quality. Assured.

Telephone: 469-814-0687 Facsimile: 717-764-4129 www.intertek.com/building

TEST REPORT FOR VTECH INDUSTRIES

Report No.: J9818.02-801-44 R0 Date: 11/06/19

SECTION 7

TEST SPECIMEN DESCRIPTION

Product Type: 4 x 4 Unit Skylight

Product Size:

	WIDTH		HEIGHT		
SKYLIGHT:	Millimeters	Inches	Millimeters	Inches	OVERALL AREA:
Overall Size	1308	51-1/2"	1308	51-1/2"	1.7 m² (18.4 ft²)
Daylight Opening	1137	44-3/4"	1137	44-3/4"	1.3 m ² (13.9 ft ²)

Frame Construction:

FRAME MEMBER	MATERIAL	DESCRIPTION
All	Black polyurethane	One piece molded polyurethane

Glazing:

The glass used in the construction of the skylight is the 13/16" GCP 750 Spall Shield product from Patriot Armor. It is a physical attack resistant glass-clad polycarbonate made up of alternating polyurethane interlayers and polycarbonate lites sandwiched between two lites of heat-strengthened glass, with a PVB interlayer and a spall shield film applied on the inboard side. Installation of the glass into skylight is achieved by molding the polyurethane frame over the glazing with a 2-1/2" glass bite.

COMPONENT TYPE	LITES/LAYERS
1/8" Heat Strengthened	(2)
0.050" Polyurethane	(2)
3/16" Polycarbonate	(2)
0.025" Polyurethane	(1)
0.030" PVB	(1)
0.070" Spall Shield	(1)



TEST REPORT FOR VTECH INDUSTRIES

Report No.: J9818.02-801-44 R0 Date: 11/06/19

SECTION 8

TEST RESULTS

The temperature during testing was 26°C (79°F). The results are tabulated as follows:

TITLE OF TEST	OBSERVATIONS	NOTE
Uniform Design Load Structural,		
per ASTM E330	No damage occurred	1 and 2
+11,970 Pa (+250.0psf)		
Uniform Over Load Structural,		
per ASTM E330	No damage occurred	1 and 2
+14,364 Pa (+300.0psf)		
Missile Impact Testing		
Per ICC 500-2014; 100 mph on	Results Below	
vertical surfaces		
LOCATION:	OBSERVATION:	
1 – Center	No perforation of the witness screen	
2 – Bottom Right Corner	No perforation of the witness screen	

General Note: All testing was performed in accordance with the referenced standard.

Note 1: Loads were held for 60 seconds.

Note 2: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.



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TEST REPORT FOR VTECH INDUSTRIES

Report No.: J9818.02-801-44 R0 Date: 11/06/19

SECTION 9

PHOTOGRAPHS



Photo No. 1 Overall View of Specimen with Impact Locations Shown



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TEST REPORT FOR VTECH INDUSTRIES

Report No.: J9818.02-801-44 R0 Date: 11/06/19



Photo No. 2 View of the Interior of the Skylight Showing the Applied Film Intact



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TEST REPORT FOR VTECH INDUSTRIES

Report No.: J9818.02-801-44 R0 Date: 11/06/19

SECTION 10

DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

Note: Complete drawings packet on file with Intertek B&C.



Physical Attack Resistant Glass-Clad Polycarbonate

PRODUCTION SPECIFICATION SHEET

PRODUCT: GCP 750 W Spall Shield 13/16"

MAKEUP:

1/8" Heat Strength Glass
.050 Polyurethane Interlayer
3/16" Polycarbonate
.025 Polyurethane Interlayer
3/16" Polycarbonate
.050 Polyurethane Interlayer
1/8" Heat Strength Glass
.030 PVB
.007" Spall Shield

* Available in Tints

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Total Quality, Assured.	Verified by:	L. Munoz

AVERAGE THICKNESS: .787"

WEIGHT: 6.5 lbs/sqft

LIGHT TRANSMISSION: 84%

STANDARD WARRANTY: Five years from date of manufacture

BALLISTIC AND FORCED ENTRY RATINGS

H.P. White TP-0500.02 Level II – Forced Entry UL Level 1. 9 mm (Low Spall) H.P. White Level B Ballistics – 9 mm (Low Spall) WMFL Level III – 30 minute Physical Attack









TEST REPORT FOR VTECH INDUSTRIES

Report No.: J9818.02-801-44 R0 Date: 11/06/19

SECTION 11

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	11/06/19	N/A	Original Report Issue