



SAFETY GLAZING MATERIAL TEST REPORT

Rendered to:

LUOYANG LANDGLASS TECHNOLOGY CO., LTD.
Guangjian Building, No. 12
Wangcheng Road, Luoyang 471000 China

Report No.: G6138.01-119-37-R1
Test Date: 12/12/16
Report Date: 01/04/17
Revision 1: 04/19/17

Testing in accordance with ANSI Z97.1-2015 & CPSC 16 CFR 1201 (1977)

Samples Obtained from Manufacturer: Luoyang LandGlass Technology Co., Ltd. - Luoyang, China

North American Distributor: VIG Technologies - Jupiter, Florida

Glazing Product Designation: Prototype

Glazing Type: Vacuum Insulating Glass

Sample Dimensions: 34" wide x 76" high **Size Classification:** Unlimited

Overall Glazing Thickness: 3/8"

Side 1 (exterior side): **Glass Type:** Tempered, Coated **Glass Thickness:** 3/16"

Side 2 (interior side): **Glass Type:** Tempered, Clear **Glass Thickness:** 3/16"

VIG System Description: Three corners constructed as depicted in Appendix A, Photo No.'s 1a & 1b, vacuum port located in fourth corner (refer to Appendix A, Photo No.'s 2a & 2b); metal band around perimeter joins both tempered glass lite faces, unknown perimeter seal applied to all four perimeter sides (refer to Appendix A, Photo No. 3). Glass lites separated by small steel spheres (pillars), the distance from pillar to pillar is approximately 45 mm (refer to Appendix A, Photo No. 4).

Duration of Pre-Conditioning @ 68 - 85°F: 24 Hours

Lab Temperature: 70°F

Impact Test Results:

Impact Drop Height: 48 inches

Specimen Number	Test Standards	Impacted Side Glass Thickness (inches)	Overall Thickness (inches)	Test Results (grams)	Center Punch (Yes/No)	Acceptance Criteria (grams)	Pass / Fail Results
* 1	ANSI + CPSC	0.191	0.407	6.2	No	79	Pass
** 2	ANSI + CPSC	0.192	0.409	7.7	No	79	Pass
* 3	ANSI + CPSC	0.192	0.408	6.1	No	79	Pass
** 4	ANSI + CPSC	0.190	0.404	16.4	No	78	Pass

* Impacted, Interior Side

**Impacted, Exterior Side

Observations: Upon breakage, the main portion of the tempered glass lites fractured into numerous particles and longer segments comprised of glass particles and ceramic frit ("composite segments"); the perimeter ceramic frit bound glass particles to itself.

Comments: VIG specimens were tested and evaluated in accordance with ANSI Z97.1-2015. Test results and observations were evaluated in accordance with ASC Z97 Technical Interpretation TI-2016.0624.001 (2016) and TI-2017.0223.001 (2017). The referenced technical interpretation is available on the Accredited Standards Committee (ASC) website at www.ansiz97.com.

Conclusion: Meets the impact requirements of the referenced standards for the size classification listed.

For INTERTEK-ATI:

Christian Lapadat
Program Manager

Virgal T. Mickley, Jr., P.E.
Senior Staff Engineer

TMW:cel:vtm/aaa

Testing witnessed by: Todd M. Wilt, Lead Technician

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix A - Photographs (3)

All test specimens were destroyed by test or by our personnel and have been disposed of as trash. Architectural Testing, Inc., an Intertek company ("Intertek-ATI"), will service this report for the entire test record retention period of four years. Test records that are retained such as detailed drawings, datasheets, or other pertinent project documentation will be retained by Intertek-ATI for the entire test record retention period.

Results obtained are tested values and were secured using the designated 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 Intertek-ATI.

Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	01/04/17	N/A	Original report issue
1	04/19/17	2	Added reference to TI-2017.0223.001 (2017), revised wording in "Observations" and "Comment" sections.





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APPENDIX A

Photographs

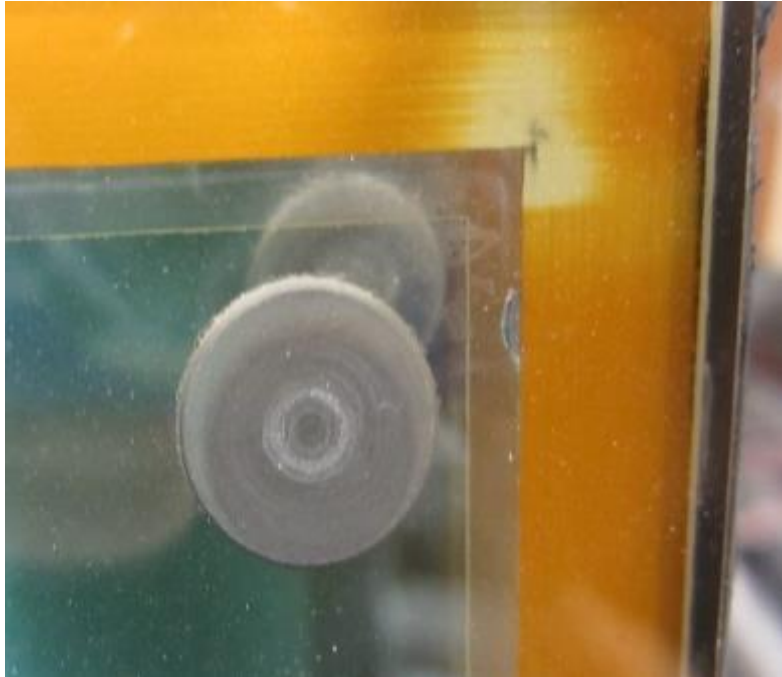


Photo No. 1a
One of three corners - Interior

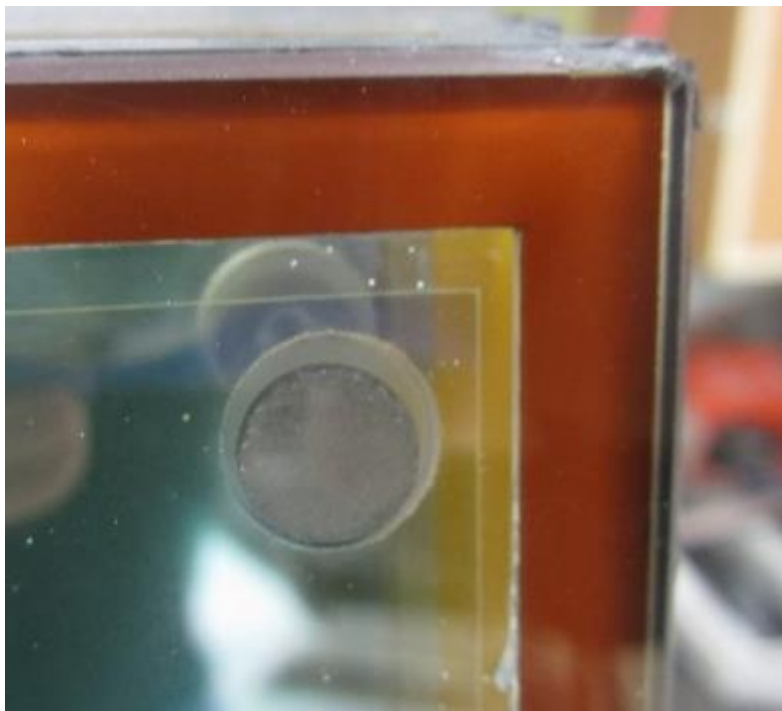


Photo No. 1b
One of three corners - Exterior

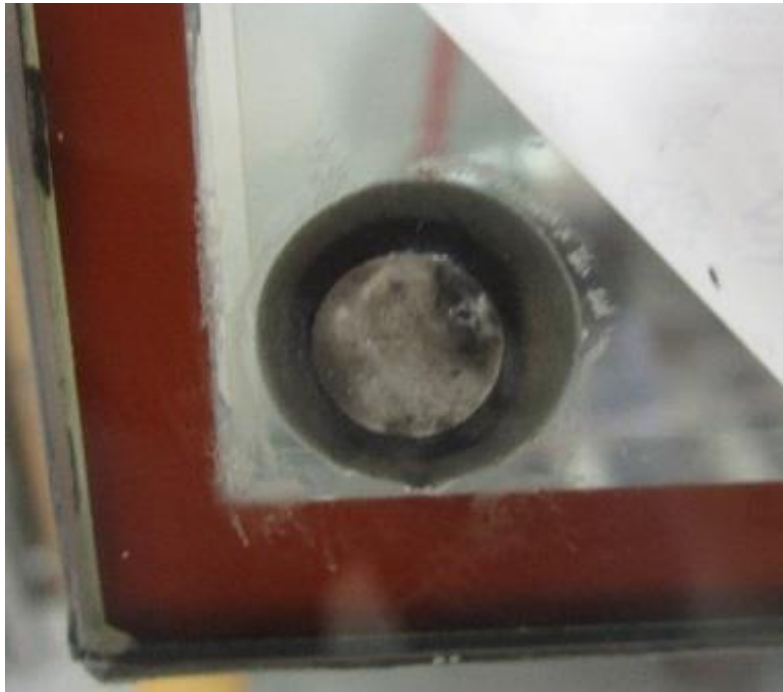


Photo No. 2a
Vacuum port - Interior

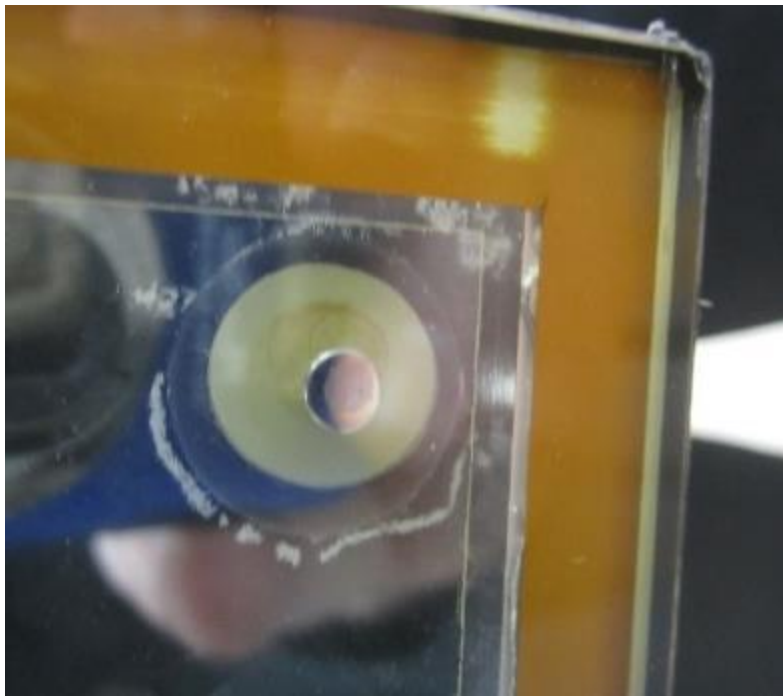


Photo No. 2b
Vacuum port - Exterior



Photo No. 3
Perimeter Sealant

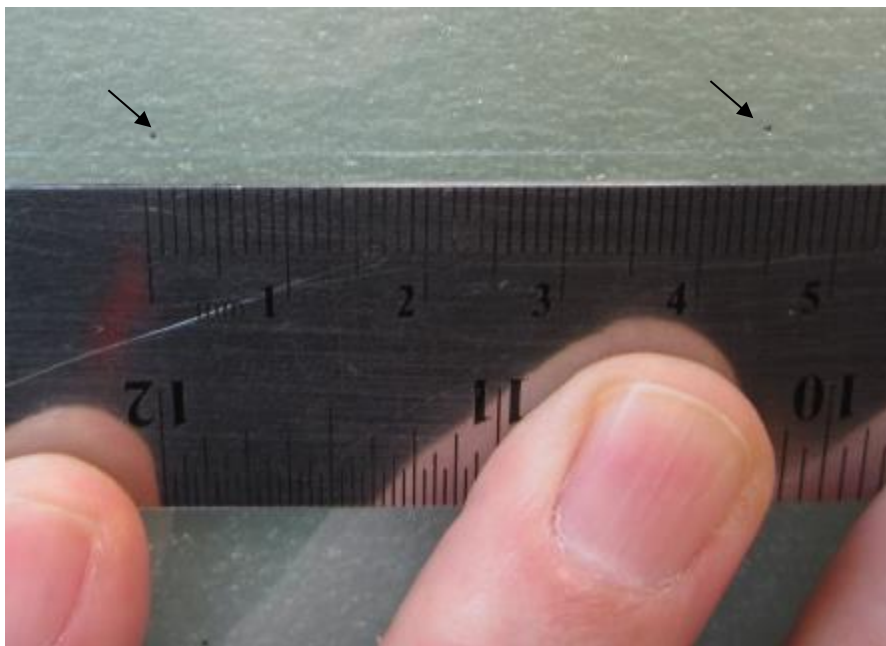


Photo No. 4
Pillar Spacing