



**PERFORMANCE EVALUATION TEST REPORT**

**Rendered to:**

**HANDI-SHIM, LLC**

**SERIES/MODEL: Handi-Shim 1/32", 1/16", 1/8" and 1/4"**

**PRODUCT: Plastic Shims**

**Report No: 86786.01-106-31**

**Report Date: 11/04/08**

**Expiration Date: 10/26/12**

**PERFORMANCE EVALUATION TEST REPORT**

Rendered to:

HANDI-SHIM, LLC  
 30 East Hayestown Road #6  
 Danbury, Connecticut 06811

Report No: 86786.01-106-31  
 Test Dates: 10/26/08  
 Through: 10/26/08  
 Report Date: 11/04/08  
 Expiration Date: 10/26/12

**Series/Model:** Handi-Shim 1/32", 1/16", 1/8", and 1/4"

**Product:** Plastic Shims

**Project Summary:** Architectural Testing, Inc. was contracted by Handi-Shim, LLC to perform Compressive Load Testing on the thinnest and thickest of their Handi-Shim Plastic Shim product (1/32" and 1/4"). The load required to cause 25% compression was recorded for each sample. The following table summarizes the results obtained.

Sample Series	Dimensions		Total Compression		Average Peak Load (lbf)	Average Compressive Strength (psi)
	Depth (in)	Cross-sectional Area (in <sup>2</sup> )	Depth (in)	% of Original		
1/32"	0.031	2.924	0.008	25	1,357	464
1/4"	0.250	2.924	0.062	25	11,470	3,922

The values reported here assume a solid contact area over the entire size of the product. Since the parts have a lesser overall surface contact area, the compressive strength values (psi) presented here are conservative and the capable strength for each product should be considered higher than the test value when utilized in actual applications.

**Test Methods:** The test specimens were evaluated in accordance with ASTM D 695-08, *Standard Test Method for Compressive Properties of Rigid Plastics*.

**Test Procedures:** Testing was performed on material which was manufactured by Handi-Shim, LLC. The specimens (nominal dimensions of 1.71 in x 1.71 in x 0.03 in and 1.71 in x 1.71 in x 0.25 in) were tested in their entirety as received (actual application form). Specimens were conditioned at 23 ±2°C (73.4 ±3.6°F) for a minimum of 40 hours prior to testing. Five specimens of both thicknesses (1/32 in and 1/4 in) were individually tested on a SATEC Unidrive, Model MII 50 UD Universal Testing Machine (ICN Y002011). Compressive load was applied at a crosshead speed of 0.05 in/min until the specimen reached 25% compression.

Data sheets, representative samples of test specimens, a copy of this test report 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 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 Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.:

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Scott D. Scallorn, Technician I  
Components/Materials Testing

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Todd D. Burroughs, Senior Project Engineer  
Components/Materials Testing

SDS:sds/nlb

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

Appendix A - Data Tables (1)

Appendix B - Photographs (2)

### Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	11/04/08	N/A	Original report issue.

**APPENDIX A**

**Data Tables**

**ASTM D 695 - Compressive Properties**

**1/32"**

Sample #	Sample Dimensions (in)			Test Parameters	Peak Load (lbf)	Compressive Strength (psi)
	Length	Width	Depth	Compression Depth (in)		
<b>1</b>	1.71	1.71	0.031	0.008	1,402	479
<b>2</b>	1.71	1.71	0.031	0.008	1,401	479
<b>3</b>	1.71	1.71	0.031	0.008	1,357	464
<b>4</b>	1.71	1.71	0.031	0.008	1,303	446
<b>5</b>	1.71	1.71	0.031	0.008	1,320	451
<b>Average</b>					<b>1,357</b>	<b>464</b>
<b>Standard Deviation</b>					<b>45.5</b>	<b>15.6</b>

**1/4"**

Sample #	Sample Dimensions (in)			Test Parameters	Peak Load (lbf)	Compressive Strength (psi)
	Length	Width	Depth	Compression Depth (in)		
<b>1</b>	1.71	1.71	0.250	0.063	11,376	3,890
<b>2</b>	1.71	1.71	0.250	0.063	11,660	3,988
<b>3</b>	1.71	1.71	0.250	0.063	11,356	3,884
<b>4</b>	1.71	1.71	0.250	0.063	11,673	3,992
<b>5</b>	1.71	1.71	0.250	0.063	11,284	3,859
<b>Average</b>					<b>11,470</b>	<b>3,922</b>
<b>Standard Deviation</b>					<b>182.9</b>	<b>62.5</b>

**APPENDIX B**

**Photographs**



**Photo No. 1**  
**Complete Handi-Shim Sample Series - Pre-Test Condition**  
(Top to Bottom, Left to Right: 1/4 in, 1/8 in, 1/16 in, and 1/32 in)

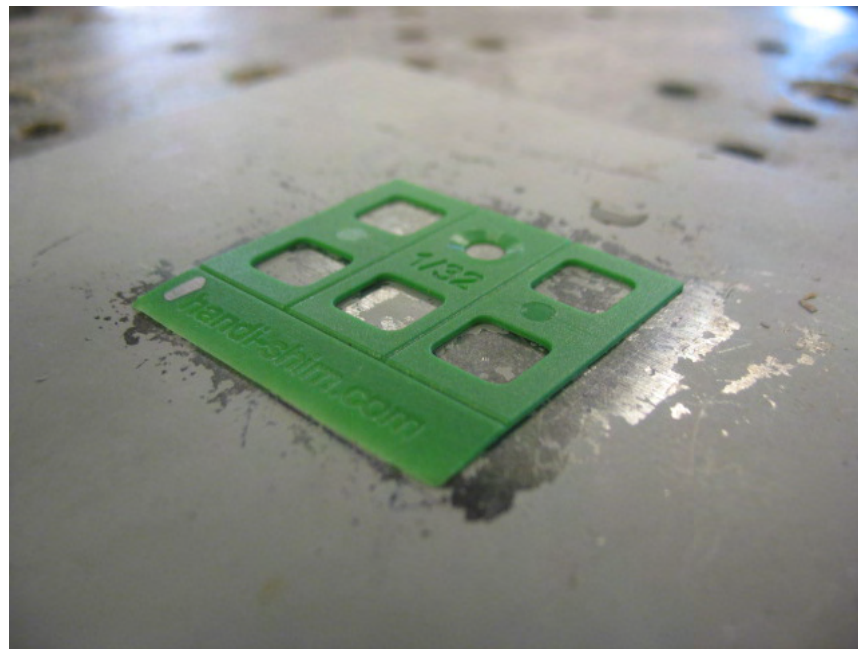


**Photo No. 2**  
**Compression Testing Apparatus - 1/4 in Sample Prepared for Testing**





**Photo No. 3**  
**1/4 in Sample - Typical Pre-Test Condition**



**Photo No. 4**  
**1/32 in Sample - Typical Pre-Test Condition**