



September 16, 2005

Mr. Mark Cerasi  
 Sur-Loc Flooring Systems, Inc.  
 P.O. Box 790  
 Ranson, WV 25438

**SUBJECT:** Compressive Strength testing on one sample submitted by the above company.

**RECEIVED:** Fourteen HDPE 10% Glass Filled Sections identified as; Floor Panels.

**COMPRESSIVE PROPERTIES OF RIGID PLASTICS ASTM D695-02 (Modified)**

Test Parameters

Test Specimen: As Received  
 Equipment: Baldwin/MTS 4 Post Load Frame  
 Platen Diameter: 14 in.  
 Rate: 0.2 in/min  
 Temperature: Ambient Room Temperature

Procedure: The sample was placed into the load frame. The actuator was then positioned so that it made contact with the sample while bearing minimal load. The load and displacement were then zeroed and the test was run. Data was taken every 0.001". The Load vs. Deflection curves are attached.

**RESULTS:**

<b><u>Properties</u></b>	<b><u>Results, lbs./ft<sup>2</sup></u></b>	<b><u>Deflection, inches</u></b>
Floor Panel – 2' x 4' non-elevated on bearing ground	31,121	0.202
@ 10,000 lbs./ft <sup>2</sup>		0.0567
@ 15,000 lbs./ft <sup>2</sup>		0.0699
@ 20,000 lbs./ft <sup>2</sup>		0.0851
Floor Panel 4' x 4' panel locked and elevated by 4 legs spaced @ 4' intervals with two steel reinforcement inserts	1,852	2.29
@ 1000 lbs./ft <sup>2</sup>		0.8238
@ 1200 lbs./ft <sup>2</sup>		0.9875
@ 1500 lbs./ft <sup>2</sup>		1.4235

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**RESULTS CONTINUED:**

<b><u>Properties</u></b>	<b><u>Results, lbs./ft<sup>2</sup></u></b>	<b><u>Deflection, inches</u></b>
Floor Panel Two 2' x 4' panels locked and elevated by 6 legs with two steel reinforcement inserts  @ 1000 lbs./ft <sup>2</sup> @ 1200 lbs./ft <sup>2</sup> @ 1500 lbs./ft <sup>2</sup>	1,772	2.53   0.9397 1.2164 1.6583
Floor Panel Two 2' x 4' panels locked and elevated by 8 legs with two steel reinforcement inserts  @ 1000 lbs./ft <sup>2</sup> @ 1200 lbs./ft <sup>2</sup> @ 1500 lbs./ft <sup>2</sup>	1,885	2.187   0.8693 1.0995 1.4649
Floor Panel Three 2' x 4' panels locked and elevated with two steel reinforcement and two 2x6 wooden beams @ 2' intervals installed at the seams.  @ 2000 lbs./ft <sup>2</sup> @ 4000 lbs./ft <sup>2</sup>	6,177   2,000 4,000	2.0994   0.626 1.067

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**RESULTS CONTINUED:**

**FLAMMABILITY RESISTANCE, UL-94**

UL-94 HB Rating

5" long x 0.5" wide specimens exposed to flame for 30 seconds.

Median results of three specimens reported.

Requirements: 40 mm/min. max. burn rate for test specimens having a thickness of 3.0 – 13mm.

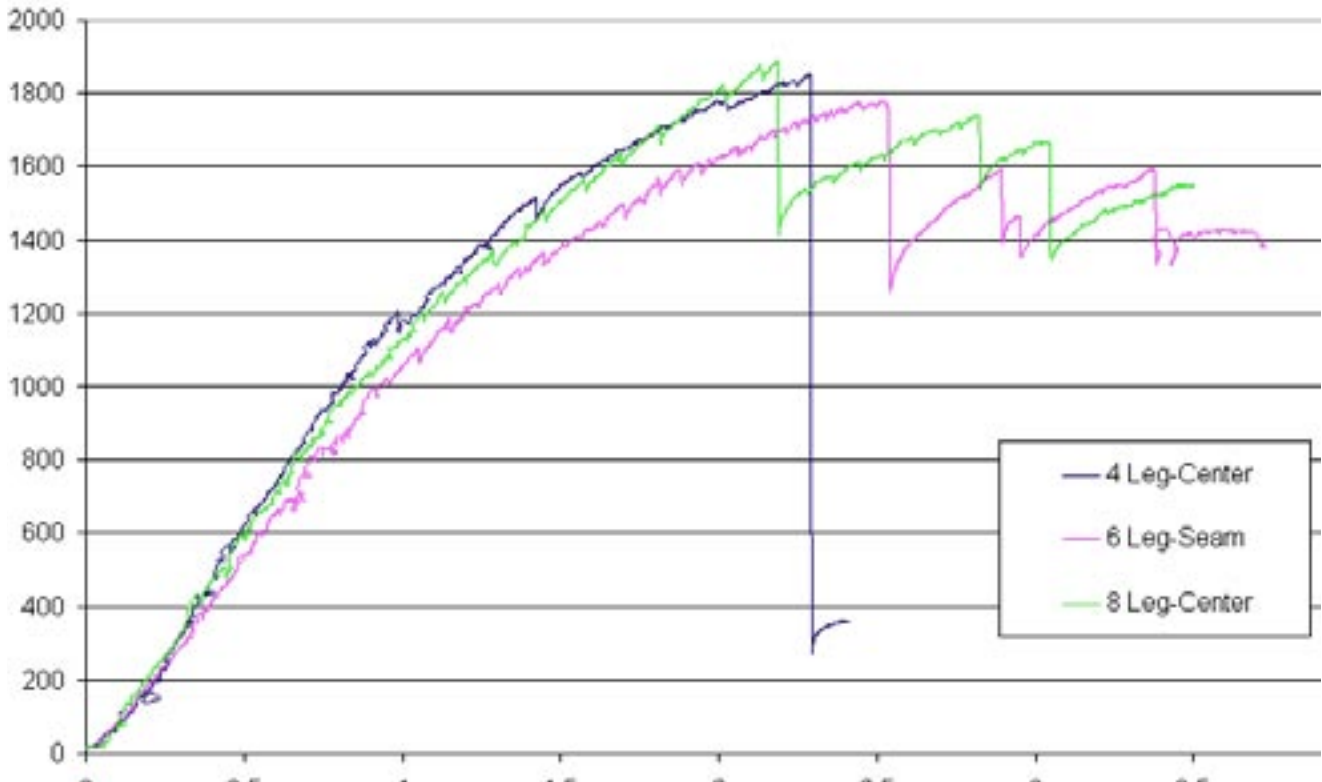
	<u>Burn Rate, mm/min.</u>	<u>Pass/Fail</u>
Floor Panel	21.6	Pass

Melissa A. Martin  
Sr. Project Technician  
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Scott W. Yates  
Assistant Manager - Plastics Testing Division

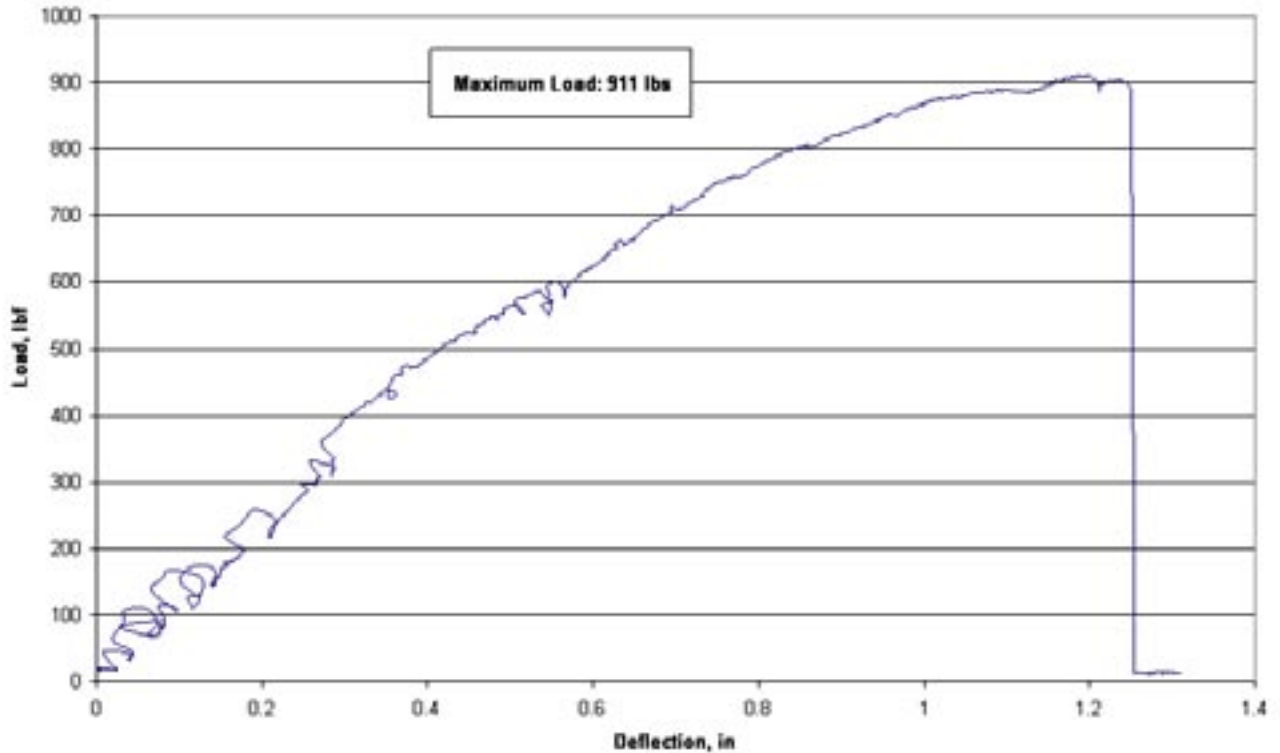
PN 64405  
MS/SWY/

### Load vs. Deflection in Compression



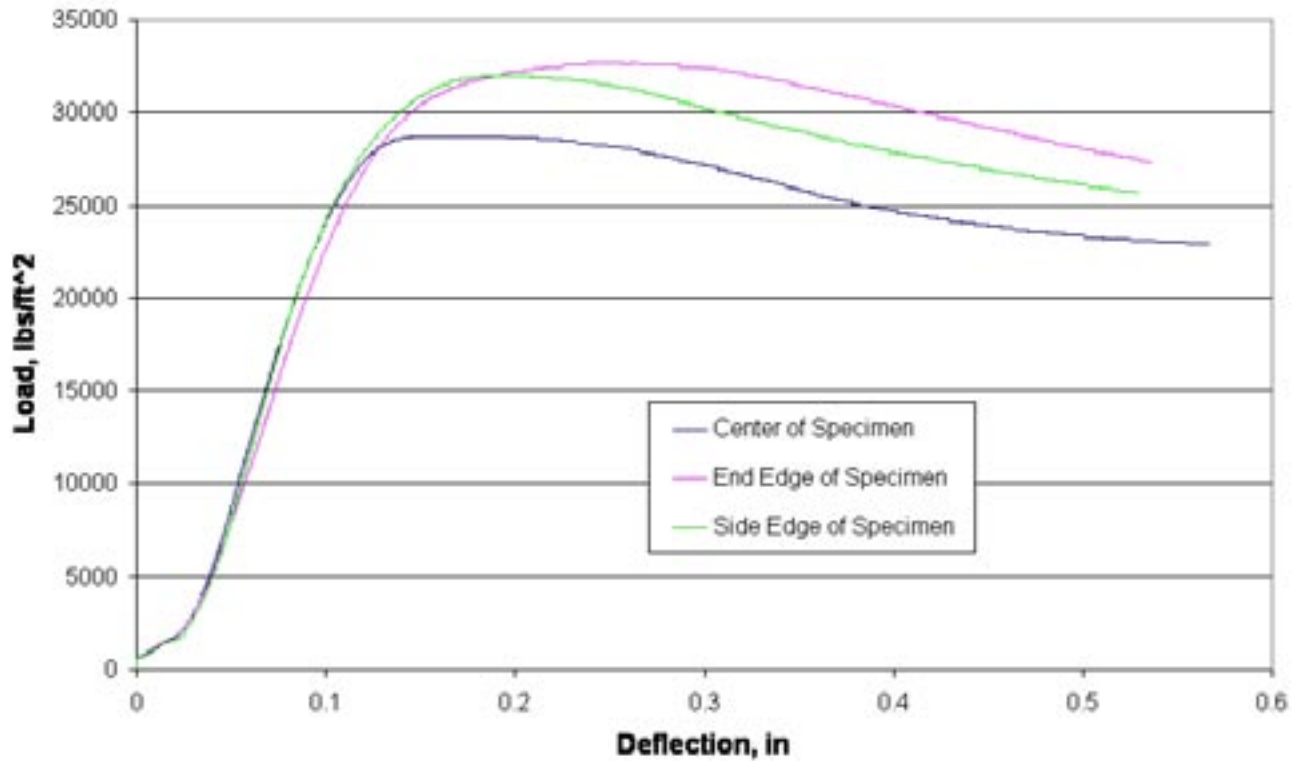
Graph 01 - Load vs. Deflection in Compression

### Shear Testing of Two Panels Assembled End to End



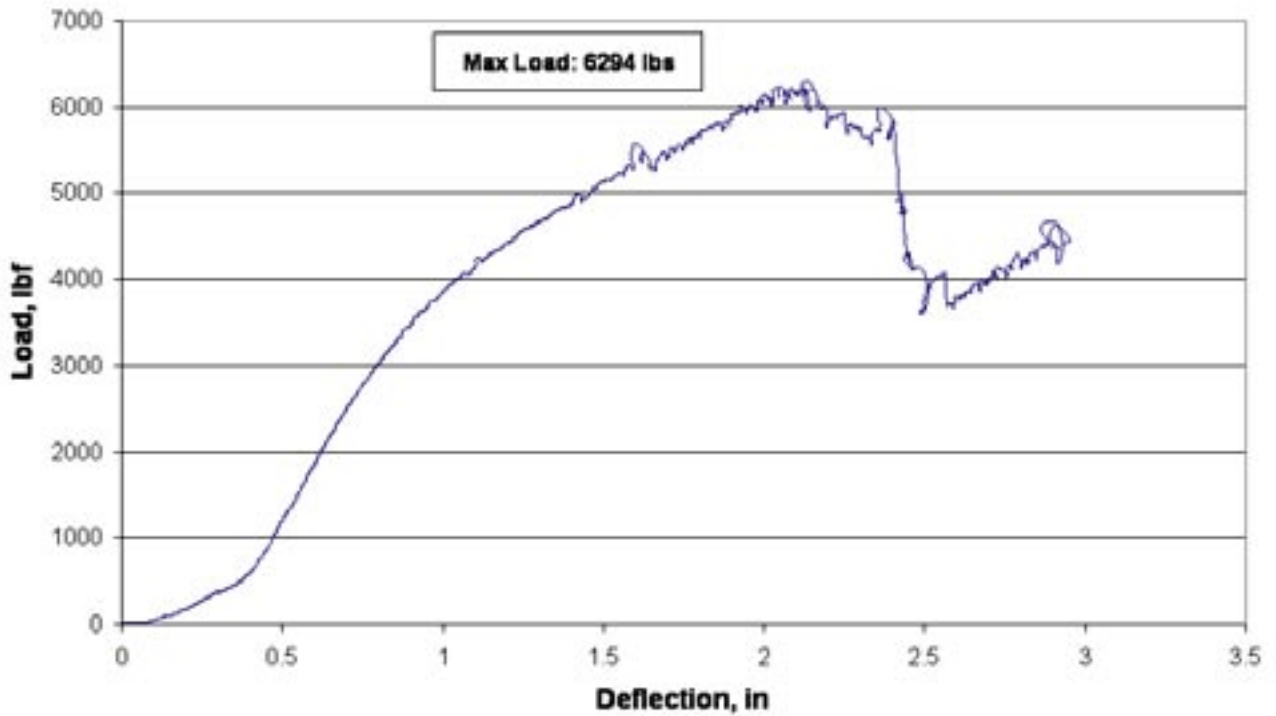
Graph 02 - Shear Testing of Two Panels Assembled End to End

### Load vs. Deflection in Compression



Graph 03 - Load vs. Deflection in Compression

### Load Testing of 3 Panels, with Wooden Beams Installed at Seams, Assembly Loaded at Center Point of Center Panel



Graph 04 - Load Testing of 3 panels, with Wooden Beams Installed at Seams

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	<u>Burn Rate, mm/min.</u>	<u>Pass/Fail</u>
Floor Panel	21.6	Pass



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