



SOUTHWESTERN LABORATORIES

222 Cavalcade Street, 77009-3213 P.O. Box 8768, Houston, Texas 77249-8768 Tel (713) 692-9151 Fax (713) 696-6307

<u>Attention:</u> Chuck Hickey **Rumber Materials, Inc.** 621 West Division Street Muenster, TX 76252 P: 940-759-4181 / F: 812/375-1972

W/O. No.: P.O. No.: Report Date: RUM004-05-26-60196-1

5/28/2004

Identification:

HLMI Plastic w/ 6% rubber

TENSILE TEST RESULTS

Method: ASTM D638

Sample	Maximum Applied Load (lbf)	Tensile Strength (psi)	Tensile Modulus (psi)	% Elongation
1	287	3,340	59,675	18
2	293	3,190	56,960	19
3	297	3,160	53,160	19
Average	292	3,230	56,600	19

FLEXURAL TEST RESULTS Method: ASTM D790

Sample	Maximum Applied Load (lbf)	Yield Strength at Maximum Load (psi)	Flexural Modulus (psi)
1	37	3,504	81,290
2	33	3,210	81,965
3	31	2,993	96,095
Average	34	3,235	86,450

Span distance of 4", based on a span-to-depth ratio of 16:1 Flexural load rate: 0.15 in./min. Nose and support radius of 0.20 in.

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products. Material submitted to our metals department will be discarded after a period of 30 days unless otherwise directed.

Respectfully Submitted

Terry Wilt / Manager, Product Evaluation

Stork SWL, is an operating unit of Stork Materials Technology B.V., Amsterdam, The Netherlands, which is a member of the Stork group





SOUTHWESTERN LABORATORIES

222 Cavalcade Street, 77009-3213 P.O. Box 8768, Houston, Texas 77249-8768 Tel (713) 692-9151 Fax (713) 696-6307

<u>Attention:</u> Chuck Hickey **Rumber Materials, Inc.** 621 West Division Street Muenster, TX 76252 P: 940-759-4181 / F: 812/375-1972

W/O. No.: P.O. No.: Report Date: RUM004-05-26-60196-1

5/28/2004

HEAT DEFLECTION RESULTS

Method: ASTM D648

Sam	ple: 1	Sample: 2		
Deflection (in.)	Temperature (°F)	Deflection (in.)	Temperature (°F)	
0.000	93	0.000	93	
0.005	115	0.004	115	
0.007	136	0.008	136	
0.010	158	0.009	158	
0.012	171	0.013	171	
0.015	183	0.015	183	
0.016	195	0.022	195	
0.019	210	0.029	210	
0.049	228	0.042	228	
0.063	240	0.052	240	
0.075	250	0.063	250	
0.110	258	0.080	258	
0.190	270	0.160	270	
0.200	280	0.260	280	

The test was conducted by immersing the samples in a medium of peanut oil

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested and/or inspected, and are not indicative of the quantities of apparently identical or similar products. Material submitted to our metals department will be discarded after a period of 30 days unless otherwise directed.

Respectfully Submitted

Terry Wilt / Manager, Product Evaluation

Stork SWL, is an operating unit of Stork Materials Technology B.V., Amsterdam, The Netherlands, which is a member of the Stork group