



# Precision Geosynthetic Laboratories



March 6, 2007

*Clint View*  
**INLAND TARP & COVER**  
4172 N. Frontage Road East  
Moses Lake, WA 98837

Dear Mr. View:

RE: **Material Testing**

Thank you for consulting Precision Geosynthetic Laboratories for your material testing needs.

Enclosed is the **final** laboratory report for the testing of one (1) 20 mil Reinforced Woven Geotextile sample received March 2, 2007.

It should be noted that the test specimen and test sample used for this report was believed to be representative of the material produced under the designation herein stated. However, these results are indicative of only the specimens that were actually tested. The testing herein is based upon accepted industry practice as well as the test method listed. Precision Geosynthetic Laboratories neither accepts responsibility for nor makes claims to the final use and purpose of the material.

By accepting the data and results represented on this report, Client agrees to limit the liability of Precision Geosynthetic Laboratories from Client and all other parties for claims arising out of the use of this data to the cost for the respective test(s) represented in this report, and Client agrees to indemnify and hold harmless Precision Geosynthetic Laboratories from and against all liability in excess of the aforementioned limit.

The test data and all associated project information shall be held in confidence, not to be reproduced except in full and disclosed to other parties with the authorization of the Client.

It is a company policy to keep the physical records of each job for 2 years since the receipt of the samples and keep the electronic file for 7 years. **Failed seam samples are kept for 7 years; good seam samples are disposed after 2 weeks and conformance samples are disposed after 1 month.** Should you need us to keep them longer, please advise us in writing.

If you have any questions or if we may be of further service, please do not hesitate to call at 800-522-4599.

Sincerely,

**PRECISION GEOSYNTHETIC LABORATORIES**

Lyvia Toledo  
Quality Assurance

Cora B. Queja  
Vice President

Enclosure: (Job No. G070232)



# Precision Geosynthetic Laboratories



CLIENT: INLAND TARP & COVER  
PROJECT: *Material Testing*

**VERIFICATION OF MATERIAL PROPERTIES**  
(PGL Job No. G070232)

**MATERIAL DESCRIPTION:** 20 mil Reinforced Woven Geotextile

**SAMPLE SENT BY:** M. Roelle, Inland Tarp & Cover

**DATE RECEIVED:** March 2, 2007

**DATE REPORTED:** March 6, 2007

**SAMPLE IDENTIFICATIONS:**

SAMPLE ID	PRECISION CONTROL NUMBER
Hiscom 20 mil B/B (Black)	31832

**TESTS REQUIRED:**

TEST METHOD	DESCRIPTION
ASTM D751	Tongue Tear, NSF Modified
ASTM D751	1" Tensile Strength
ASTM D1777	Thickness
ASTM D751	Mass per Unit Area
ASTM D751	Grab Strength Procedure A
ASTM D3786	Mullen Burst Strength
ASTM D4833	Puncture Resistance
ASTM D751	Hydrostatic Resistance

**TEST CONDITIONS:** The sample was conditioned for a minimum one hour in the laboratory at  $22 \pm 2^{\circ}\text{C}$  ( $71.6 \pm 3.6^{\circ}\text{F}$ ) and at  $60 \pm 10\%$  relative humidity prior to test.

**TEST RESULTS:**

The test results are summarized in Table 1. The units in which the data are reported are included on this table.

**PRECISION GEOSYNTHETIC LABORATORIES**

Lyvia Toledo  
Quality Assurance

Cora B. Queja  
Vice President

**TABLE 1.**  
**MATERIAL PROPERTIES**  
**CLIENT: INLAND TARP & COVER**  
**PROJECT: Material Testing**

Date Received: **3/2/2007**

Date Reported: **3/6/2007**

Client Sample ID: **Hiscom 20 mil B/B (Black)**

Material Description: **20 mil Reinforced Woven Geotextile**

QC'd By: *A. Toledo*

PGL Job No.: **G070232**

PGL Control No.: **31832**

		SPECIMENS										Avg.	Std. Dev.	Min	Max	Proj. Specs.
METHOD	DESCRIPTION	1	2	3	4	5	6	7	8	9	10					
<b>ASTM D1777</b>	Thickness (mils)															
Test Option #1	<i>Used deadweight type dial micrometer with 1.129+/-0.001in dia presser foot with an applied pressure of 0.6+/-0.03psi provided by a 272gm weight.</i>															
		21	21	21	21	21	21	20	21	21	20	21	0	20	21	
<b>ASTM D751</b>	Mass per Unit Area (oz/ yd. <sup>2</sup> )															
	<i>Test Specimen Size: 4" x 8"</i>															
		9.6	9.3	9.7	9.6	9.5						9.6	0.1	9.3	9.7	
<b>ASTM D4833</b>	Puncture Resistance (lbs)															
	<i>Specimens were tested as directed in Test Method D4833. They were clamped without tension between circular plates of a ring clamp attachment secured in the tensile machine. Test specimens extended to or beyond the outer edges of the clamping plates.</i>															
		101	110	112	136	103	123	131	120	120	117	114	11	101	136	
		108	102	103	117	106										
<b>ASTM D3786</b>	Mullen Burst Strength (psi)															
	<i>(Total Breaking Pressure - Tare Pressure)</i>															
	<i>Specimens were tested as directed in Test Method D3786 using the Mullen Tester.</i>															
		375	385	365	375	375	385	355	365	385	385	375	11	355	385	
<b>ASTM D751</b>	Tongue Tear Resistance (lbs)															
NSF Modified	A	78	81	73	71	87						78	6	71	87	
	B	80	83	70	79	75						77	5	70	83	
<b>ASTM D751</b>	Grab Tensile															
Procedure A	Tensile Strength (lbs)															
	A	242	178	216	208	230						215	25	178	242	
	B	281	263	279	276	264						273	8	263	281	
	Elongation at Break (percent)															
	A	24	23	22	19	22						22	2	19	24	
	B	30	31	32	31	29						31	1	29	32	

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**MATERIAL PROPERTIES**  
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**PROJECT: Material Testing**

Date Received: **3/2/2007**

Date Reported: **3/6/2007**

Client Sample ID: **Hiscom 20 mil B/B (Black)**

Material Description: **20 mil Reinforced Woven Geotextile**

QC'd By: *A. Toledo*

PGL Job No.: **G070232**

PGL Control No.: **31832**

		SPECIMENS										Avg.	Std. Dev.	Min	Max	Proj. Specs.	
METHOD	DESCRIPTION	1	2	3	4	5	6	7	8	9	10						
<b>ASTM D751</b>	Strip Tensile																
Procedure B	Tensile Strength (lbs/in)																
	A	152	158	155	178	185						166	15	152	185		
	B	180	178	172	176	173						176	3	172	180		
	Elongation at Break (percent)																
	A	18	19	19	20	24						20	2	18	24		
	B	24	26	23	26	24						25	1	23	26		
<b>ASTM D751</b>	Hydrostatic Resistance (psi)																
Procedure A1	<i>Test method used pressure application by Mullen Type Hydrostatic Tester with screen and glass support.</i>																
		140	135	150	140	135	130	140	140	135	140	139	5	130	150		