

TRI Environmental Asia Sdn Bhd

2025 Fee Schedule General Conformance

**3rd Party QA Conformance Testing
Same Day Destructive Seam Testing
Interface Shear Testing
In-plant Sampling
Water Vapor Transmission
Methane Gas Permeability**

For project specific quotations, please contact:
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Item	Test Description	Test Method Number	Similar Test Method / Notes	Cost per Sample
DESTRUCTIVE SEAM TESTING				
1	Peel and Shear (weekday same-day service)	ASTM D6392	ASTM D 4437	\$53
2	Peel and Shear (Saturday service)	ASTM D6392	ASTM D 4437	\$89
3	Peel and Shear	ASTM D751 shear / ASTM D413 peel	ASTM D7747	\$105
GEOMEMBRANE TESTING:				
1	Asperity Height	ASTM D7466	GRI GM12	\$36
2	Carbon Black Content	ASTM D1603	ASTM D4218	\$54
3	Carbon Black Dispersion	ASTM D5596	ASTM D3015	\$65
4	Notched Constant Tensile Load (textured GM)	ASTM D5397	Plaging of Textured Geomembrane	\$270
5	Notched Constant Tensile Load (Single Point)	ASTM D5397	500 hours	\$875
6	Density	ASTM D1505		\$41
7	Melt Flow Index	ASTM D1238		\$82
8	Methane Gas Permeability	ASTM D1434	3-specimens	\$3,000
9	Modulus - 2% Secant	ASTM D5323		\$177
11	Oven Aging w/OIT (Baseline / Post Exposure)	ASTM D5721	90 day exposure	\$1,572
13	Oxidative Induction Time (OIT)	ASTM D8117	ASTM D3895	\$400
14	Oxidative Induction Time - High Pressure (HPOIT)	ASTM D5885	up to 400 minutes	\$500
15	Oxidative Induction Time - High Pressure (HPOIT)	ASTM D5885	Cost per minute > 400 minutes; add to base price previous line	\$0.45
16	Puncture Resistance - Index	ASTM D4833		\$67
17	Specific Gravity/Density	ASTM D792		\$47
18	Tear Resistance	ASTM D1004		\$71
19	Tensile Strength	ASTM D6693		\$81
20	Multi-Axial	ASTM D5617		\$820
21	Thickness	ASTM D5994	ASTM D5199	\$33
22	UV Resistance (Unreinforced Polyolefin GMs)	ASTM D7238	per hour exposure	\$1.50
22	UV Resistance (Unreinforced Polyolefin GMs)	ASTM D7238	per hour exposure	\$1.50
23	Water Vapor Transmission	ASTM E96, Cond. A, B, BW	up to 4-weeks	\$1,000
24	Water Vapor Transmission	ASTM E96, Cond. A, B, BW	cost per week after 4-weeks; add to base price previous line	\$175
GEOTEXTILE TESTING:				
1	Apparent Opening Size	ASTM D4751		\$147
2	Mass/Unit Area	ASTM D5261	ASTM D3776	\$42
3	Mullen Burst Strength	ASTM D3786		\$102
4	Permittivity/Permeability	ASTM D4491		\$135
5	Puncture Resistance - Index	ASTM D4833		\$67
6	Puncture (CBR) - 50 mm probe	ASTM D6241		\$147
7	Seam Strength (non-woven)	ASTM D4884		\$230
8	Seam Strength with Wide-Width Tensile (non-woven)	ASTM D4884		\$680
9	Tensile Strength/Elongation - Grab	ASTM D4632		\$81
10	Tensile Strength/Elongation - Strip	ASTM D5035		\$81
11	Tensile Strength/Elongation-Wide Width (non-woven)	ASTM D4595	ISO10319	\$459
12	Thickness	ASTM D5199	ASTM D1777	\$33
13	Trapezoidal Tear Resistance	ASTM D 4533		\$77
13	UV Resistance	ASTM D 4355	Cost per Exposure Hr.	\$3
14	UV Resistance 500 Hr w/ Before & After Tensile	ASTM D 4355		\$1,850

GEONET / GEOCOMPOSITE TESTING:				
1	Carbon Black Content	ASTM D1603	ASTM D4218	\$54
2	Compressive Strength	ASTM D6364	ASTM D1621, GRI GN1	\$350
3	Density	ASTM D1505		\$41
4	Mass/Unit Area	ASTM D5261	ASTM D3776	\$42
5	Peel Strength - MD Only	ASTM D7005	ASTM D413	\$81
6	Tensile Strength/Elongation - Strip	ASTM D7179	ASTM D5035	\$81
7	Tensile Strength/Elongation-Wide Width	ASTM D4595	MD and TD	\$459
8	Transmissivity - Planar	ASTM D4716	15 min., 1 load, plates, 1 gradient	\$200
9	Transmissivity - Planar	ASTM D4716	24 hr., 1 load, profile, 1 gradient	\$310
10	Transmissivity - Planar	ASTM D4716	100 hr., 1 load, profile, 1 gradient	\$619
11	Thickness	ASTM D5199	ASTM D1777	\$33
GCL TESTING:				
1	Free Swell	ASTM D5890		\$128
2	Fluid Loss	ASTM D5891		\$128
3	Internal Shear Strength	ASTM D6243	Single Point, 0.04 in/min, 16 hr.	\$315
3	Internal Shear Strength	ASTM D6243	Single Point, 0.004 in/min, 16 hr.	\$570
4	Mass/Unit Area	ASTM D5993		\$62
5	Moisture Content	ASTM D2216	ASTM D4643	\$62
6	Peel Strength	ASTM D6496	ASTM D4632, modified	\$102
8	Permeability / Hydraulic Conductivity / Flux	ASTM D5887 / D5084	5x10-9 cm/sec (First 5 days)	\$328
9	Tensile Strength	ASTM D6768	ASTM D 4632, modified	\$81
INTERFACE FRICTION / DIRECT SHEAR TESTING:				
NOTE: Because each interface friction/direct shear test is site-specific, project-specific costs must be provided by TRI. However, the general fees demonstrated below may be used for estimate purposes				
1	Geosynthetic vs Geosynthetic	ASTM D5321/D6243	3-pt. Test, 1 hour seat, 0.2 ipm	\$625
2	Soil vs Geosynthetic or Geosynthetic vs Geosynthetic	ASTM D5321/D6243	3-pt. Test, 16 hour seat, 0.04 ipm	\$975
3	Soil vs Geosynthetic or Geosynthetic vs Geosynthetic	ASTM D5321/D6243	3-pt. Test, 48 hour seat, 0.04 ipm	\$1,710
4	Soil vs Geosynthetic or Geosynthetic vs Geosynthetic	ASTM D5321/D6243	3-pt. Test, 16 hour seat, 0.004 ipm	\$1,710
5	Soil vs Geosynthetic or Geosynthetic vs Geosynthetic	ASTM D5321/D6243	3-pt. Test, 48 hour seat, 0.004 ipm	\$2,500
6	Soil vs Geosynthetic or Geosynthetic vs Geosynthetic	ASTM D5321/D6243	X-pt. Test, X hour seat, X ipm	Call for quote
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1	U.S. Manufacturing	Geomembrane, Geonet, Geocomposite, GCL, Geotextile		\$103
3	Project Management	Project Updates, Schedules and Managing		\$119
SAMPLE SHIPMENT COSTS: All sample shipment expenses will be invoiced for at cost plus handling. Alternatively, TRI may use client's shipping account number on all shipments. TRI minimizes sample shipment expenses via in-plant preparation of test coupons (serving to reduce mass of sample) and reduction of the number of shipping containers.				