

Geomembrane Standard Frequency of Testing



Product Data

PROPERTY	TEST METHOD	FREQUENCY OF TESTING (MIN.)*
Thickness (min. ave.), mil (mm)	ASTM D5994/D5199	per roll
Asperity Height (min. ave.), mil (mm)	GRI GM12 (for textured liner)	per roll, alternating top/bottom for dbl sided textured liner only
Density, g/cc, minimum average	ASTM D792, Method B	200,000 lbs (railcar)
Tensile Properties (ave. both directions)	ASTM D6693, Type IV	
Strength @ Yield (min. ave.), lb/in width (n/mm)	2 in/minute	
Elongation @ Yield (min. ave.), % (GL=1.3in)	5 specimens in each direction	20,000 lbs
Strength @ Break (min. ave.), lb/in width (n/mm)		
Elongation @ Break (min. ave.), % (GL=2.0in)		
Tear Resistance (min. ave.), lbs. (n)	ASTM D1004	45,000 lbs
Puncture Resistance (min. ave.), lbs. (n)	ASTM D4833	45,000 lbs
Carbon Black Content (range in %)	ASTM D4218	20,000 lbs
Carbon Black Dispersion (Category)	ASTM D5596	45,000 lbs
Stress Crack Resistance (Single Point NCTL), hours	ASTM D5397, Appendix	per GRI GM10
Oxidative Induction Time, minutes	ASTM D3895, 200°C, 1 atm O ₂	200,000 lbs (railcar) on finished liner
Melt Flow Index, g/10 minutes	ASTM D1238, 190°C, 2.16kg	200,000 lbs (railcar) on incoming resin
Low Temperature Brittleness, °C	ASTM D746, -60°C	200,000 lbs (railcar) on finished liner
Oven Aging	ASTM D5721	per resin formulation
with HP OIT, (% retained after 90 days)	ASTM D5885, 150°C, 500psi O ₂	
UV Resistance	GRI GM11	per resin formulation
with HP OIT, (% retained after 1600 hours)	ASTM D5885, 150°C, 500psi O ₂	
2% Secant Modulus (max.), lb/in. (n/mm)	ASTM D5323	per resin formulation- for LLDPE liner only
Axi-Symmetric Break Resistance Strain, % (min.)	ASTM D5617	per resin formulation- for LLDPE liner only

These test frequencies meet or exceed GRI's GM13/GM17

***These test frequencies may be changed based on project specifications, and represent the minimum MQC testing performed.**

Additional costs may be incurred if required testing is greater than listed above, or if testing for properties not listed above is required.

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