

# Geomembrane Standard Frequency of Testing



## Product Data

Property	Test Method	Frequency of testing (minimum)*
Thickness (min. ave.), mil	ASTM D5994/D5199	per roll
Asperity Height (min. ave.), mil	ASTM D7466	per roll, for textured liner
Density, g/cc, minimum	ASTM D792, Method B	200,000 lbs (railcar) on finished liner & incoming resin
Tensile Properties (ave. both directions)	ASTM D6693, Type IV	
Strength @ Yield (min. ave.), lb/in width	2 in/minute	20,000 lbs
Elongation @ Yield (min. ave.), % (GL=1.3in)	5 specimens in each direction	20,000 lbs
Strength @ Break (min. ave.), lb/in width		20,000 lbs
Elongation @ Break (min. ave.), % (GL=2.0in)		20,000 lbs
Tear Resistance, lbs. (min. ave.)	ASTM D1004	45,000 lbs
Puncture Resistance, lbs. (min. ave.)	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 (NCTL), hours	ASTM D5397, Appendix	200,000 lbs (railcar)
Oxidative Induction Time, minutes	ASTM D3895, 200°C, 1 atm O <sub>2</sub>	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
Oven Aging	ASTM D5721	
with HP OIT, (% retained after 90 days)	ASTM D5885, 150°C, 500psi O <sub>2</sub>	per resin formulation
UV Resistance	ASTM D7238	
with HP OIT, (% retained after 1600 hours)	ASTM D5885, 150°C, 500psi O <sub>2</sub>	per resin formulation
2% Secant Modulus, lb/in. (max.)	ASTM D5323	per resin formulation- <b>for LLDPE liner only</b>
Axi-Symmetric Break Resistance Strain, % (min.)	ASTM D5617	per resin formulation- <b>for LLDPE liner only</b>

**These test frequencies meet or exceed GRI's GM13 and 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**

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