

Flat Die Extruded Smooth Geomembrane

Technical Data

Smooth Geoliner is produced from HDPE resin conforming to the requirements of the GRI-GM13 specification.

Properties	Units	Test Method	Test Frequency	Min Average Values				
Thickness. Minimum Avg.(a)	mm	ASTM D 5199	Per roll	1	1.5	2	2.5	3
Formulated Density	g/cc	ASTM D 792 ASTM D 1505	90 000kg/ approx. every 60 rolls	≥0.94	≥0.94	≥0.94	≥0.94	≥0.94
Tensile Properties - Minimum Avg. (b)								
• Yield Strength	kN/m	ASTM D 6693	9 000kg/ approx. every 6 rolls	15	22	29	37	44
• Yield Elongation	%	Type IV		12	12	12	12	12
• Break Strength	kN/m	Dogbone		27	40	53	67	80
• Break Elongation	%			700	700	700	700	700
Tear Resistance. Minimum Avg.	N	ASTM D 1004	20 000kg/ approx. every 12 rolls	125	187	249	311	374
Puncture Resistance. Minimum Avg.	N	ASTM D 4833	20 000kg/ approx. every 12 rolls	320	480	640	800	960
Dimensional Stability	%	ASTM D 1204	every 40 rolls	±2	±2	±2	±2	±2
Rapid tensile test (300mm/min)	visual	ASTM D 6693	90 000kg/ approx. every 60 rolls	No Separation Visible				
Carbon Black Content	%	ASTM D 4218	9 000kg/ approx. every 6 rolls	2 - 3	2 - 3	2 - 3	2 - 3	2 - 3
Carbon Black Dispersion	Category	ASTM D 5596	20 000kg/ approx. every 12 rolls	cat.1 / cat.2	cat.1 / cat.2	cat.1 / cat.2	cat.1 / cat.2	cat.1 / cat.2
Oxidative Induction Time (OIT)								
Standard OIT — and —	minutes	ASTM D 3895	90 000kg/ approx. every 60 rolls	>100	>100	>100	>100	100
High Pressure OIT	minutes	ASTM D 5885		>400	>400	>400	>400	400
Stress Crack Resistance (SP - NCTL)	Hours	ASTM D 5397 Appendix	180 000kg/ approx. every 120 rolls	500	500	500	500	500
Oven Aging at 85°C (c)								
Standard OIT (min. avg.) retained after 90 days — or —	%	ASTM D 5721 ASTM D 3895	Per Formulation	55	55	55	55	55
High Pressure OIT (min. avg.) retained after 90 days	%	ASTM D 5885		80	80	80	80	80
UV Resistance - % retained after 1600 hrs. High Pressure OIT (min. avg.)	%	ASTM D 7238 ASTM D 5885		50	50	50	50	50