

GEOFLEX™ - GEOMEMBRANE

Layfield's GeoFlex™ uses next-generation catalyst technology optimized to deliver flexibility with UV and chlorine resistance. GeoFlex™ is a highly flexible lining material that makes detail work, such as building tanks, attaching to structures, or creating corners, easy.

In addition to flexibility, GeoFlex™ has excellent resistance to both Slow Crack Growth (SCG) and Environmental Stress Cracking (ESCR) and is suitable for water and water-based effluent storage. Exhibiting high impact strength and puncture resistance, this product has outstanding resistance to low temperatures. This geomembrane also meets GRI GM-17 requirements and is suitable for various primary and secondary containment applications.

April 2023		GeoFlex™			
Rev	ASTM	GeoFlex™ 20	GeoFlex™ 30	GeoFlex™ 40	GeoFlex™ 60
Thickness (min. avg)	D5199	20 mil / 0.50 mm	30 mil / 0.75 mm	40 mil / 1.00 mm	60 mil / 1.50 mm
Thickness, Lowest Individual value of 10	D5199	18 mil / 0.45 mm	27 mil / 0.67 mm	36 mil / 0.90 mm	54 mil / 1.37 mm
Sheet Density (max.)	D792	0.939 g/cc	0.939 g/cc	0.939 g/cc	0.939 g/cc
Tensile Strength @Break	D6693; Type IV Die	95 ppi / 16.5 N/mm	141 ppi / 24 N/mm	180 ppi / 31 N/mm	255 ppi / 44 N/mm
Tensile Elongation @Break	D6693; Type IV Die	800%	800%	800%	800%
2% Secant Modulus (max)	D5323 (Tested Value)	500 ppi / 87 N/mm	810 ppi / 141 N/mm	1068 ppi / 187 N/mm	1450 ppi / 253 N/mm
Tear Resistance (min. avg)	D1004	9 lbs / 40 N	14 lbs / 62 N	18 lbs / 80 N	27 lbs / 120 N
Puncture Resistance (min. avg)	D4833	44 lbs / 195 N	53 lbs / 235 N	67 lbs / 298 N	90 lbs / 400 N
Large Scale Hydrostatic Puncture; Critical Cone Height (min.)	D5514; Proc. A (Tested Value)	-	-	-	3 in / 76 mm
Axi-Symmetric Break Resistance Strain (min.)	D5617 (Tested Value)	-	100%	-	150%
Resistance to Damage by Flexing; De Mattia Method	ISO 7854:1995 (Tested Value)	300,000 cycles	200,000 cycles	-	-
Brittleness Temperature	D746M (Tested Value)	< -100°C			
ESCR (Chlorine, 10ppm; 1000 hrs exposure, 50°C)	D1693; Cond. A (Tested Value)	100% Pass (Tested for 30 mil)	100% Pass	100% Pass (Tested for 30 mil)	100% Pass (Tested for 30 mil)

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High Pressure Oxidative Induction Time (min.)	D5885	1000 minutes	1000 minutes	1000 minutes	1000 minutes
Carbon Black Content	D4218	2.0 - 3.0%	2.0 - 3.0%	2.0 - 3.0%	2.0 - 3.0%
Carbon Black Dispersion	D5596	9 out of 10 in CAT 1 or 2	9 out of 10 in CAT 1 or 2	9 out of 10 in CAT 1 or 2	9 out of 10 in CAT 1 or 2
Chlorine Resistance (Chlorine, 10ppm; 1000 hrs exposure, 50°C) % retained HPOIT after 1000 hrs (min.)	D5747/D5885		70%		
Oven Ageing at 85°C, % retained OIT after 90 days (min.)	D5721/D8117				>35%
UV Resistance % retained, HPOIT after 1600 hrs (min.)	D7238/D5885		60%		

**Unsupported

Our GeoFlex™ is a specialized polyethylene flexible membrane liner material that has been developed with next generation catalyst technology. The superior yield elongation makes it a good choice for tank liners where its high elongation prevents development of stress points in the corners. GeoFlex™ is a flexible membrane liner that can be factory fabricated and delivered in one large panel with minimum field seaming required on site.

April 2023		GeoFlex™ Minimum Shop Seam Strengths		
Style	ASTM D6392	GeoFlex™ 30	GeoFlex™ 40	
Heat Bonded Seam Strength	25 mm (1") Strip	45 ppi 7.8 N/mm	60 ppi 10.5 N/mm	
Heated Bond Peel Adhesion Strength	25 mm (1") Strip	38 ppi 6.5 N/mm	50 ppi 8.8 N/mm	

April 2023		GeoFlex™ Minimum Field Seam Strengths			
Style	ASTM D6392	Geoflex™ 20	Geoflex™ 30	Geoflex™ 40	
Heat Bonded Seam Strength	25.4 mm (1 in) Strip	28 ppi 4.9 N/mm	42 ppi 7.4 N/mm	52 ppi 8.9 N/mm	
Heated Bond Peel Adhesion Strength	25.4 mm (1 in) Strip	FTB 17 ppi 3.0 N/mm	FTB 25 ppi 4.4 N/mm	FTB 33 ppi 5.8 N/mm	

INSTALLATION

Layfield's GeoFlex™ 30 and 40 mil geomembranes can be prefabricated into large panels (up to 30,000 square feet at 30 mil). The prefabricated panel is accordion folded, rolled on a core, and delivered to the job site. Prefabricated panels can often cover a small project with a single panel. Local labor forces can be used to unroll and unfold the panel, while on larger projects, Layfield installation forces can be used to join panels. Layfield has spent years developing innovative thin-film seaming technology. All of our primary field welding of GeoFlex™ is based on hot wedge welding technology. Field wedge welding of GeoFlex™ provides strong seams and fast installations on large projects. Call for an estimate of how field wedge welding can help meet your critical construction schedule. GeoFlex™ can be repaired using handheld heat welding techniques or extrusion welding.

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