



Enviro Liner 6000 HD

Enviro Liner® 6000HD is Layfield's flagship geomembrane brand with outstanding UV resistance and performance properties.

EL 6000 HD Material Properties

4 July 2013		Enviro Liner® 6000 ^{HD} Minimum Material Properties ¹			
Style	ASTM	Enviro Liner® 6020 ^{HD}	Enviro Liner® 6030 ^{HD}	Enviro Liner® 6040 ^{HD}	Enviro Liner® 6060 ^{HD}
Thickness (Nominal)	D5199	20 mil 0.5 mm	30 mil 0.75 mm	40 mil 1.0 mm	60 mil 1.5 mm
Tensile Strength at Break ²	D638	95 ppi 16.5 N/mm	141 ppi 25 N/mm	180 ppi 31.5 N/mm	255 ppi 44.5 N/mm
Elongation at Break ³	D638	1000%	1000%	1000%	1000%
Tear Resistance	D1004	11 lbs 49 N	17.5 lbs 78 N	23.5 lbs 104 N	35 lbs 156 N
Low Temperature Impact Resistance	D1790	-94°F -70°C	-94°F -70°C	-94°F -70°C	-94°F -70°C
Puncture Resistance	D4833	41 lbs 182 N	53 lbs 236 N	67 lbs 298 N	90 lbs 400 N
Critical Cone Height ⁴	D5514	1.9" 50 mm	1.9" 50 mm	-	-
Axi-Symmetric Break Resistance, Strain (min)	D 5617	50%	50%	50%	50%
UV Resistance, Strength Retained 30,000 hours (Black Styles Only)	D 4329	-	90%	90%	90%
High Pressure Oxidative Induction Time (HPOIT)	D 5885	2000 mins	2000 mins	2000 mins	2000 mins
Resistance to Brine Solution ⁵ Test done at 90°C(194°F), HPOIT retained after 2400 hrs exposure	D 1693	1000 mins	1000 mins	1000 mins	1000 mins
Flexibility ⁶ , Number of cycles prior to surface cracking	D 6182	8000	8000	-	-
Ozone Resistance, Exposed to 168 hrs @ 100 pphm @ 40C, Observations made at 7X Magnification	D 1149	No Cracks	No Cracks	No Cracks	No Cracks
Water Vapour Transmission Rate	D 1249	-	3x10 ⁻¹³ cm/sec	3x10 ⁻¹³ cm/sec	3x10 ⁻¹³ cm/sec
Solvent Vapour Permeability ⁷ ASTM Fuel C (50:50, Toluene:Isooctane) ASTM IRM 902 (Naphthenic Distillates)	Inverted cup method		≤ 10 grms/m ² .hr	≤10 grms/m ² .hr	≤10 grms/m ² .hr
Methane Permeability ⁸	D 1434	-	2.11 x 10 ⁻⁴ m ³ /m ² .day	2.11 x 10 ⁻⁴ m ³ /m ² .day	2.11 x 10 ⁻⁴ m ³ /m ² .day
Coefficient of Linear Thermal Expansion	D 696	1.4x10 ⁻⁴ m/m/deg C	1.4x10 ⁻⁴ m/m/deg C	1.4x10 ⁻⁴ m/m/deg C	1.4x10 ⁻⁴ m/m/deg C
Potable Water Certification		NSF 61, AS/NZ 4020	NSF 61, AS/NZ 4020	NSF 61, AS/NZ 4020	NSF 61, AS/NZ 4020

Notes: ¹Meets or exceed the GRI GM 17, ² Tested with a machine speed of 20"/min, ³ Measured with a gage length of 1.5 inches, ^{4,5,6,7,8} Performance Properties, tested once per formulation.

Shop Seam Strengths

Feb 2013		Enviro Liner® 6000 ^{HD} Shop Seam Strengths		
Style	ASTM	Enviro Liner® 6020 ^{HD}	Enviro Liner® 6030 ^{HD}	Enviro Liner® 6040 ^{HD}
Heat Bonded Seam Strength	D6392 25.4 mm (1") Strip	37 ppi 6.5 N/mm	50 ppi 8.8 N/mm	60 ppi 10.5 N/mm
Heat Bonded Peel Adhesion Strength	D6392 25.4 mm (1") Strip	FTB 30 ppi 5.3 N/mm	FTB 45 ppi 7.9 N/mm	FTB 50 ppi 8.8 N/mm

Field Seam Strengths

Feb 2013		Enviro Liner® 6000 ^{HD} Field Seam Strengths		
Style	ASTM	Enviro Liner® 6020 ^{HD}	Enviro Liner® 6030 ^{HD}	Enviro Liner® 6040 ^{HD}
Heat Bonded Seam Strength	D6392 25.4 mm (1") Strip	30 ppi 5.3 N/mm	45 ppi 7.9 N/mm	60 ppi 10.5 N/mm
Heat Bonded Peel Adhesion Strength	D6392 25.4 mm (1") Strip	FTB 26 ppi 4.6 N/mm	FTB 40 ppi 7.0 N/mm	FTB 50 ppi 8.8 N/mm

Disclaimer**Please Note**

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