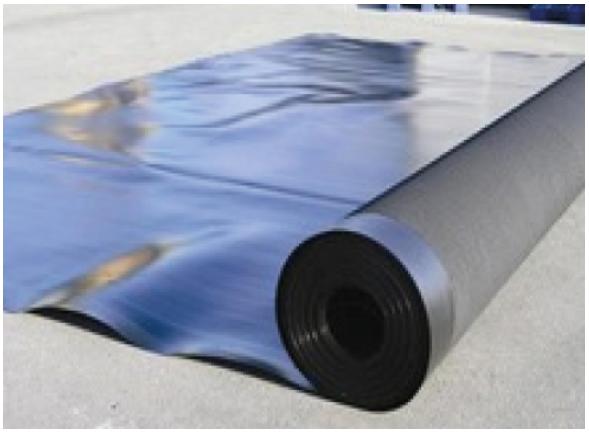
Specialist Geomembranes

Technical Data sheet

Landflex™ PE-LL Smooth Finish



A high quality, single layer LLDPE suitable for use as a barrier membrane on brownfield sites, petrol stations, coalfields, landfill & contaminated industrial areas. The material is highly suited to attenuation ponds, lagoons, water features & as a high performance damp proof membrane because of its high puncture resistance. The membrane offers protection from Carbon Dioxide, Methane and Radon as well as certain common hydrocarbons.

All Landflex™ PE-LL geomembranes are certified according to the relevant European Standards:
EN13361, EN13362, EN13491, EN13492, EN13493, EN15382 & EN13967

The information herein is based upon data obtained by the manufacturer and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data. This information is furnished upon the condition that the person receiving it shall evaluate its suitability for the specific application.

Tested Property	Unit	Test Method	Values (*)					
Thickness [a]	mm	ASTM D 5199	0.5	0.75	1.00	1.50	2.00	2.50
Density	g/cm³	ASTM D 792	≤0.939	≤0.939	≤0.939	≤0.939	≤0.939	≤0.939
Tensile Properties (each direction) (Minimum Average)		ASTM D 638/6693 Type IV: 200 mm/min: lo=50mm						
Strength at break Elongation at break	N/mm %		16 (13) 950 (800)	24 (20) 950 (800)	33 (27) 950 (800)	50 (40) 950 (800)	66 (53) 950 (800)	82 (66) 950 (800)
Tear Resistance (min. avge)	N	ASTM D 1004	55 (50)	80 (70)	110 (100)	165 (150)	220 (200)	275 (250)
Puncture Resistance (min. avge)	N	ASTM D 4833	160 (120)	240 (190)	320 (250)	430 (370)	550 (500)	660 (620)
Carbon Black Content	%	ASTM D 4218	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	Category	ASTM D 5596	1/2[b]	1/2[b]	1/2[b]	1/2[b]	1/2[b]	1/2[b]
Dimesional Stability (each direction)	%	ASTM D 1204 (100°C/1h)	±2	±2	±2	±2	±2	±2
Melt Flow Index [c]	g/10min	ASTM D 1238 (190°C / 5.00kg) (190°C / 2.16kg)	 ≤ 3.0 ≤ 1.0	 ≤ 3.0 ≤ 1.0	 ≤ 3.0 ≤ 1.0	 ≤ 3.0 ≤ 1.0	 ≤ 3.0 ≤ 1.0	 ≤ 3.0 ≤ 1.0
Oxidative Induction Time (OIT)	min	ASTM D 3895 (200°C: Pure O_2: 1atm)	≥ 100	≥ 100	≥ 100	≥ 100	≥ 100	≥ 100

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Reference Property								
Multiaxial Elongation at Break	%	similar to ASTM D 5617 Ø=500mm	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30
Low Temperature Brittleness	°C	ASTM D 746	-77	-77	-77	-77	-77	-77
UV Resistance [d] HP-OIT retained after 1600 hrs [a]	%	ASTM D 7238 ASTM D 5885	≥ 35	≥ 35	≥ 35	≥ 35	≥ 35	≥ 35
Roll Width (approx.)[f]	m	---	7.0	6.9 - 7.5				7.5
Surface	---	---	Double Sided Smooth					

NOTES:
(*) All values - unless otherwise noted - are nominal values. Values in brackets are minimum values within the 95% confidence interval
(a) Tolerance ± 10% for the lowest individual reading - Special thickness availabale upon request
(b) Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be category 1 or 2. No more than 1 view from category 3.
(c) Standard test conditions: 190°C / 5.0 kg
(d) Test conditions: 20 hours UV cycle at 75°C followed by 4 hours condensation at 60°C
(e) UV Resistance is based on percent retained value regardless of the original High Pressure - OIT value
(f) Roll widths and lengths have a tolerance of ± 1%



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