



Technical Data Low Density Polyethylene (LLPDE) Geomembrane - Smooth

Properties	Test Method	Test Value				Testing Frequency (minimum)
		1.0mm	1.50mm	2.00mm	2.5mm	
Thickness -mm (min. ave.) • lowest individual of 10 values	D5199	nom. -10%	nom. -10%	nom. -10%	nom. -10%	per roll
Density g/ml (max.)	D 1505/ D 792	0.939	0.939	0.939	0.939	90,000 kg
Tensile Properties (1) (min. ave.) • break strength – N/mm • break elongation - %	D 6693 Type IV	27 800	40 800	53 800	66 800	9,000 kg
2% Modulus – N/mm (max.)	D 5323	420	630	840	1050	per formulation
Tear Resistance - N (min. ave.)	D 1004	100	150	200	250	20,000 kg
Puncture Resistance - N (min. ave.)	D 4833	250	370	500	620	20,000 kg
Axi-Symmetric Break Resistance Strain - % (min.)	D 5617	30	30	30	30	per formulation
Carbon Black Content - %	D 1603 (3)	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	20,000 kg
Carbon Black Dispersion	D 5596	note (3)	note (3)	note (3)	note (3)	20,000 kg
Oxidative Induction Time (OIT) (min. ave.) (4) (c) Standard OIT — or — (d) High Pressure OIT	D 3895 D 5885	100 400	100 400	100 400	100 400	90,000 kg
Oven Aging at 85°C (5) (a) Standard OIT (min. ave.) -% retained after 90 days — or — (b) High Pressure OIT (min. ave.) - % retained after 90 days	D 5721 D 3895 D 5885	35 60	35 60	35 60	35 60	per formulation
UV Resistance (6) (a) Standard OIT (min. ave.) — or — (b) High Pressure OIT (min. ave.) - % retained after 1600 hrs (8)	D 3895 D 5885	N.R. (7) 35	N.R. (7) 35	N.R. (7) 35	N.R. (7) 35	per formulation

- Machine direction (MD) and cross machine direction (XMD) average values should be on the basis of 5 test specimens each direction.
 - Break elongation is calculated using a gauge length of 50mm at 50mm/min.
- Other methods such as D 4218 (muffle furnace) or microwave methods are acceptable if an appropriate correlation to D 1603 (tube furnace) can be established.
- Carbon black dispersion (only near spherical agglomerates) for 10 different views:
 - 9 in Categories 1 or 2 and 1 in Category 3
- The manufacturer has the option to select either one of the OIT methods listed to evaluate the antioxidant content in the geomembrane.
- It is also recommended to evaluate samples at 30 and 60 days to compare with the 90 day response.
- The condition of the test should be 20 hr. UV cycle at 75°C followed by 4 hr. condensation at 60°C.
- Not recommended since the high temperature of the Std-OIT test produces an unrealistic result for some of the antioxidants in the UV exposed samples.
- UV resistance is based on percent retained value regardless of the original HP-OIT value.

This data is based on GRI GM17 Revision 5: 7/10/06. It is provided for informational purposes only and is not intended as a warranty or guarantee. Skellerup Containment Systems assumes no responsibility in connection with the use of this data. These values are subject to change without notice. Please contact us for updated information.