

Properties	ASTM Test Method	Test Value				Testing Frequency (min.)
		1.00mm	1.50mm	2.00mm	2.50mm	
<b>Thickness, mm (min. ave.)</b> • lowest individual of 10 values	D 5199	nom. -10%	nom. -10%	nom. -10%	nom. -10%	per roll
<b>Density, g/ml (max.)</b>	D 1505/ D 792	0.939g/cc	0.939g/cc	0.939g/cc	0.939g/cc	90,000kg
<b>Tensile Properties (1) (min. ave.)</b> • Break Strength, N/mm • Break Elongation, %	D 6693 Type IV	27 800	40 800	53 800	66 800	9,000kg
<b>2% Modulus, N/mm (max.)</b>	D 5323	420	630	840	1050	per formulation
<b>Tear Resistance, N (min. ave.)</b>	D 1004	100N	150N	200N	250N	20,000kg
<b>Puncture Resistance, N (min. ave.)</b>	D 4833	250N	370N	500N	620N	20,000kg
<b>Axi-Symmetric Break Resistance Strain, % (min.)</b>	D5617	30	30	30	30	per formulation
<b>Carbon Black Content, %</b>	D 1603 (3)	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	20,000kg
<b>Carbon Black Dispersion</b>	D 5596	note (3)	note (3)	note (3)	note (3)	20,000kg
<b>Oxidative Induction Time (OIT) (min. ave.) (4)</b> (c) Standard OIT or (d) High Pressure OIT	D 3895  D 5885	100  400	100  400	100  400	100  400	90,000kg
<b>Oven Ageing at 85°C (5)</b> (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
<b>UV Resistance (6)</b> (a) Standard OIT (min. ave.) or (b) High Pressure OIT (min. ave.), % retained after 1600hrs (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 20hr. UV cycle at 75°C followed by 4hr. 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 6: 06/01/09. It is provided for informational purposes only and is not intended as a warranty or guarantee. Viking Containment 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.*

## Colours & Finishes

Black smooth finish (standard). Custom Colours available upon request.

## Dimensions

Geoshield LLDPE is available in thicknesses of 1.0mm to 2.5mm, roll sizes vary and are available upon request.