

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. (mil) -10%	nom. (mil) -10%	nom. (mil) -10%	nom. (mil) -10%	per roll
<b>Density (min.)</b>	D 1505/ D 792	0.940g/cc	0.940g/cc	0.940g/cc	0.940g/cc	90,000kg
<b>Tensile Properties (1) (min. ave.)</b> • Yield Strength • Break Strength • Yield Elongation • Break Elongation	D 6693 Type IV	15kN/m 27kN/m 12% 700%	22kN/m 40kN/m 12% 700%	29kN/m 53kN/m 12% 700%	37kN/m 67kN/m 12% 700%	9,000kg
<b>Tear Resistance (min. ave.)</b>	D 1004	125N	187N	249N	311N	20,000kg
<b>Puncture Resistance (min. ave.)</b>	D 4833	320N	480N	640N	800N	20,000kg
<b>Stress Crack Resistance (2)</b>	D 5397 (App.)	300hr.	300hr.	300hr.	300hr.	per GRI GM10
<b>Carbon Black Content, %</b>	D 1603 (3)	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	9,000kg
<b>Carbon Black Dispersion</b>	D 5596	note (4)	note (4)	note (4)	note (4)	20,000kg
<b>Oxidative Induction Time (OIT) (min. ave.) (5)</b> (a) Standard OIT or (b) High Pressure OIT	D 3895 D 5885	100 min. 400 min.	100 min. 400 min.	100 min. 400 min.	100 min. 400 min.	90,000kg
<b>Oven Ageing at 85°C (5), (6)</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	55% 80%	55% 80%	55% 80%	55% 80%	per each formulation
<b>UV Resistance (7)</b> (a) Standard OIT (min. ave.) or (b) High Pressure OIT (min. ave.), % retained after 1600hrs (9)	D 3895 D 5885	N.R. (8) 50%	N.R. (8) 50%	N.R. (8) 50%	N.R. (8) 50%	per each formulation

1. Machine direction (MD) and cross machine direction (XMD) average values should be on the basis of 5 test specimens each direction. Yield elongation is calculated using a gauge length of 33mm. Break elongation is calculated using a gauge length of 50mm.
2. The yield stress used to calculate the applied load for the SP-NCTL test should be the manufacturer's mean value via MQC testing.
3. 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.
4. Carbon black dispersion (only near spherical agglomerates) for 10 different views: 9 in Categories 1 or 2 and 1 in Category 3.
5. The manufacturer has the option to select either one of the OIT methods listed to evaluate the antioxidant content in the geomembrane.
6. It is also recommended to evaluate samples at 30 and 60 days to compare with the 90 day response.
7. The condition of the test should be 20hr. UV cycle at 75°C followed by 4hr. Condensation at 60°C.
8. 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.
9. UV resistance is based on percent retained value regardless of the original HP-OIT value.

*This data is based on GRI GM13 Revision 9: 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 HDPE is available in thicknesses of 1.0mm to 2.5mm, roll sizes vary and are available upon request.