

Properties	ASTM Test Method	Test Value				Testing Frequency (min.)
		1.00mm	1.50mm	2.00mm	2.50mm	
Thickness, mm (min. ave.) - lowest individual for 8 out of 10 values - lowest individual for any of the 10 values	D 5994	nom. (-5%) -10% -15%	nom. (-5%) -10% -15%	nom. (-5%) -10% -15%	nom. (-5%) -10% -15%	per roll
Asperity Height, mm (min. ave.) (1)	GM 12	0.25mm	25mm	25mm	25mm	every 2 nd roll (2)
Density g/ml (max.)	D 1505/ D 792	0.939g/cc	0.939g/cc	0.939g/cc	0.939g/cc	90,000kg
Tensile Properties (3) (min. ave.) - Break Strength, N/mm - Break Elongation, %	D 6693 Type IV	11 250	16 250	21 250	26 250	9,000kg
2% Modulus, N/mm (max.)	D 5323	420	630	840	1050	per formulation
Tear Resistance, N (min. ave.)	D 1004	100N	150N	200N	250N	20,000kg
Puncture Resistance, N (min. ave.)	D 4833	200N	300N	400N	500N	20,000kg
Axi-Symmetric Break Resistance Strain, % (min.)	D5617	30	30	30	30	per formulation
Carbon Black Content, %	D 1603 (4)	2.0-3.0%	2.0-3.0%	2.0-3.0%	2.0-3.0%	20,000kg
Carbon Black Dispersion	D 5596	note (5)	note (5)	note (5)	note (5)	20,000kg
Oxidative Induction Time (OIT) (min. ave.) (7) (a) Standard OIT (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
Oven Ageing at 85°C (7) (a) Standard OIT (min. ave.), % retained after 90 days (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 (8) (a) Standard OIT (min. ave.) (b) High Pressure OIT (min. ave.), % retained after 1600hrs (8)	D 3895 D 5885	N.R. (9) 35%	N.R. (9) 35%	N.R. (9) 35%	N.R. (9) 35%	per formulation

- Of 10 readings; 8 out of 10 must be ≥ 0.18mm, and lowest individual reading must be ≥ 0.13mm; also see Note 9.
- Alternate the measurement side for double sided textured sheet
- 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. 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). Black single or double sided textured 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.