



## Technical Data Sheet

# HD40 – 40 Mil Smooth HDPE Geomembrane

Resin Properties	Test Method	Frequency <sup>(2)</sup>	Resin HD
Resin density	ASTM D1505	Once per Batch	> 0.932 g / cm <sup>3</sup>
Melt Index <i>(max.)</i>	ASTM D1238	Once per Batch	1.0 g / 10 minutes
Oxidative Induction Time <i>(standard avg.)</i>	ASTM D3895	Once per Batch	100 minutes
Stress Crack Resistance <i>(SP-NCTL)</i>	ASTM D5397	Once per Batch	400 hours

Sheet Properties	Test Method	Frequency <sup>(2)</sup>	HD40	
			Metric Units	English Units
Thickness <i>(min. avg.)</i> <i>(min.)</i>	ASTM D5199	Every Roll	1.00 mm 0.90 mm	40 mil 36 mil
Standard Roll Dimensions <i>(Roll dimensions may vary ± 1%)</i>	-	-	6.8 m x 237.7 m	22.3 ft x 780.0 ft
Sheet Density	ASTM D1505	Every Second Roll	≥ 0.940 g / cm <sup>3</sup>	≥ 0.940 g / cm <sup>3</sup>
Carbon Black Content	ASTM D4218	Every Second Roll	2.0 to 3.0 %	2.0 to 3.0 %
Carbon Black Dispersion	ASTM D5596	Every Sixth Roll	Category 1 & 2	Category 1 & 2
Tensile <i>(min. avg.)</i> <sup>(1)</sup> - Yield Strength - Yield Elongation <i>(1.3 in. gage length.)</i>  - Break Strength - Break Elongation <i>(2 in. gage length.)</i>	ASTM D6693	Every Second Roll	15 kN / m 13 %  28 kN / m 700 %	84 lbs / in 13 %  162 lbs / in 700 %
Tear Resistance <i>(min. avg.)</i>	ASTM D1004	Every Sixth Roll	125 N	28 lbf
Puncture Resistance <i>(min. avg.)</i>	ASTM D4833	Every Sixth Roll	355 N	80 lbf
Oven Aging - % retained after 90 days High pressure OIT <i>(min. avg.)</i>	ASTM D5721 ASTM D5885	Per Formulation	80%	80%
UV Resistance - % Retained after 1600hrs High pressure OIT <i>(min. avg.)</i>	GRI-GM-11 ASTM D5885	Per Formulation	50%	50%

1 - Machine direction (MD) and Cross machine Direction (XMD) average values should be on the basis of 5 test specimens each direction.

2 - Testing frequency based on standard roll dimensions and one resin batch is approximately 180,000 lbs (or one railcar)