

# Geomembrane – Linear Low Density Polyethylene

## Product Data Sheet

### Penteco LD-S80

### 80 mil LLDPE

### Smooth Surface

- ❖ **Containment**
- ❖ **Erosion Control**
- ❖ **Leak Detection**
- ❖ **Water Proofing**
- ❖ **Buried Applications**

LLDPE geomembranes have a lower dense cell structure making them more flexible, easier to install, and less sensitive to stress cracking than HDPE geomembranes. Although, further comparison shows LLDPE has lower UV resistance, it's still considered a great option for exposed applications.

LLDPE liners have better tensile properties allowing it to accommodate stretching and creasing better than HDPE - this is a critical design factor for buried applications. Due to its flexibility, thinner LLDPE geomembranes can be prefabricated in larger panels saving installation time, cost and a better-quality install.

LD-S80			Minimum Average Values	
Property	Test Method	Frequency	Imperial	Metric
Thickness (min. average)	ASTM D-5199	Per Roll	80 mil	2.0 mm
Thickness (minimum)		Per Roll	72 mil	1.8 mm
Density	ASTM D-1505	200,000 lbs (90,000 kg)	0.939 g/cm <sup>3</sup>	0.034 lb/in <sup>3</sup>
Tensile Properties	ASTM D-6693 Type IV	20,000 lbs (9,000 kg)		
Yield Strength			304 lb/in	40 KN/m
Break Elongation			800 %	800 %
Tear Resistance	ASTM D-1004	45,000 lbs (20,000 kg)	44 lb	150 N
Puncture Resistance	ASTM D-4833	45,000 lbs (20,000 kg)	112 lb	370 N
Axi-Symmetric Break Resistance Strain	ASTM D-5617	200,000 lbs (90,000 kg)	30 %	30 %
Carbon Black Content	ASTM D-4218	20,000 lbs (9,000 kg)	2.0 % - 3.0%	2.0 % - 3.0%
Carbon Black Dispersion	ASTM D-5596	45,000 lbs (20,000 kg)	Only near spherical agglomerates as per GRI-GM13	
Oxidative Induction Time	ASTM D-8117	200,000 lbs (90,000 kg)	100 mins	100 mins
Oven Aging - % retained after 90 days	ASTM D-8117	200,000 lbs (90,000 kg)	35 %	35 %
UV Res. - % retained after 1600 hrs	ASTM D-5885	200,000 lbs (90,000 kg)	35 %	35 %
<b>Dimensions</b>				
Typical Roll Size	Measured		22.5 ft x 435 ft	6.86 m x 132.6 m
Area	Calculated		9,788 ft <sup>2</sup>	909 m <sup>2</sup>

#### Notes:

- (1) All roll widths/lengths have a tolerance of ±1 %.
- (2) Custom roll lengths can be ordered. Transportation cost might be affected.
- (3) Penteco is a distributor for this product with manufacturing partners based out of Canada & USA.
- (4) Manufacturer's data sheet provided at time of purchase with adjusted widths/lengths.
- (5) Penteco's LLDPE specifications are equivalent to GRI's GM 17 standard.

**DISCLAIMER:** The data above represents the manufacturer's laboratory testing of their product. It is the user's responsibility to determine the suitability of the products. Penteco is a distributor for these products through its manufacturing partners. Penteco will provide the manufacturers data sheet at the time of sale. There may be very slight variation, but overall, the data represents standard industry specifications. Penteco and manufacturing partners assume no liability, nor can they provide any warranty, without having additional information regarding the use of the products. The same goes for any infringement on patents - no permission can be granted without further disclosure.

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