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MATERIAL SPECIFICATION Exceliner PP

EXCELINER PP is a polypropylene/ethylene copolymer geomembrane produced from a resin formulation which is designed to provide a premium quality geomembrane with excellent flexibility, improved elasticity and puncture resistance. These properties assure maximum multi-axial elongation to accommodate differential settlement. Exceliner PP is ideal for most geomembrane applications and major benefits to installation are provided by a lower coefficient of thermal expansion and a wide temperature welding window.

Tested Property	Test Method	Minimum Values ⁽¹⁾			
		0.75	1.00	1.50	2.00
Thickness (mm) ⁽²⁾	ASTM D 5199	0.75	1.00	1.50	2.00
Density (g/cm ³)	ASTM D792/1505 A	0.88	0.88	0.88	0.88
Tensile Properties (each direction)	ASTM D 6693, Type IV, speed 50mm pm				
Strength at Break (N/mm)		13	18	26	36
Elongation at Break %	G.L 50 mm	960	960	960	960
Tear Resistance (N)	ASTM D 1004	45	55	90	120
Puncture Resistance (N)	ASTM D 4833	120	150	200	300
Carbon Black – Content (%)	ASTM D 1603	3.0	3.0	3.0	3.0
Carbon Black – Dispersion	ASTM D 5596	(3)	(3)	(3)	(3)
Reference Property	Test Method	Nominal Values			
Melt Flow Index g/10 Minutes	ASTM D 1238 Cond 190/2.16	<1.0	<1.0	<1.0	<1.0
Multi-Axial Strain %	ASTM D 5617	>100	>100	>100	>100
Dimensional Stability %	ASTM D 1204	+/- 1.0%	+/- 1.0%	+/- 1.0%	+/- 1.0%
Oxidative Induction Time, Minutes (Standard OIT)	ASTM D 3895, 200°C, Pure O ₂ , 1atm	100	100	100	100
Low Temperature Brittleness °C	ASTM D 746 Condition B	< - 40	< - 40	< - 40	< - 40

- Note 1 Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.
Note 2 Value at 95% confidence interval.
Note 3 Average value of 10 specimens taken across roll width. No value to be less than 90% of average value.