

PROPERTY <sup>(1)</sup>	TEST METHOD	FREQUENCY	UNIT Metric	1120267
<b>SPECIFICATIONS</b>				
TESTED PROPERTY	-	-		
Thickness (11)	ISO 9863-1	Every roll	mm	1.50
Density (min.)	ISO 1183-1	Every 10 rolls	g/cm <sup>3</sup>	0.940
Carbon Black Content	ASTM D4218	Every 10 rolls	%	2.0 - 3.0
Carbon Black Dispersion	ASTM D5596	Every 10 rolls	Category	Cat. 1 / Cat. 2
Tensile Properties (2)	ISO 527-3	Every 5 rolls		
Strength at Yield			MPa	17 (16)
Elongation at Yield			%	11 (10)
Strength at Break			MPa	35 (26)
Elongation at Break			%	800 (700)
Tear Resistance (MD/CMD)	ISO 34-1/B	Every 10 rolls	N	210 (195)
Puncture Resistance	ISO 12236	Every 50 rolls	N	3900 (3500)
Stress Crack Resistance (NCTL)	ASTM D5397	1/Batch	hr	500
Oxidative Induction Time (OIT)	ASTM D3895	Every 50 rolls	min	100
REFERENCE PROPERTY	-	-		
Melt Index - 190°C/5.0 kg (max.)	ISO 1133-1	Per formulation	g/10 min	3.0
Melt Index - 190°C/2.16 kg (max.)	ISO 1133-1	Per formulation	g/10 min	1.0
UV Resistance	ASTM D7238	Per formulation		
% HP-OIT retained after 1600 hr	ASTM D5885		%	50
Oven Aging - % retained after 90 days	ASTM D5721	Per formulation		
STD OIT (min. avg.) (7)	ASTM D3895		%	55
HP OIT (min. avg.) (7)	ASTM D5885		%	80
Low Temperature Brittleness	ASTM D746	Certified	°C	- 77
Dimensional Stability (12)	DIN 53377	Certified	%	± 2
Weathering Resistance	EN 12224	Certified		Note 4
Water Tightness	EN 14150	Certified	m <sup>3</sup> /(m <sup>2</sup> .day)	<10 <sup>-6</sup>
<b>SUPPLY SPECIFICATIONS(Roll dimensions may vary ±1%)</b>				
Roll Dimension - Width	-		m	7.50
Roll Dimension - Length	-		m	140.0
Area (Surface/Roll)	-		m <sup>2</sup>	1050.00

## NOTES

1. Testing frequency based on standard roll dimensions.
2. Values in brackets are minimum average, the ones in front are nominal. Machine Direction (MD) and Cross Machine Direction (CMD). Type 5; 100 mm/min; lo=50 mm.
4. Predicted to be UV-resistant for  $\leq 25$  years under normal ambient conditions in Europe.
7. The manufacturer has the option to select either one of the OIT methods listed to evaluate the antioxidant content in the geomembrane.
10. 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.
11. Minimum average thickness: Nominal -5 %, lowest individual  $\pm 5$  % related to the actual thickness.
12. 120°C, 1 hour.

\* All values - unless otherwise noted - are nominal values.

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