

Solmax International Inc., 2801 Boul. Marie-Victorin, Varennes, Qc, Canada, J3X 1P7  
 Tel.: (450) 929-1234 Fax: (450) 929-2550 www.solmax.com

PROPERTY	TEST METHOD	FREQUENCY <sup>(1)</sup>	UNIT Imperial	Solmax 840-3000	Solmax 860-3000	Solmax 880-3000
<b>SPECIFICATIONS</b>						
Thickness (min. avg.)	ASTM D-5199	Every roll	mils	40.0	60.0	80.0
Thickness (min.)	ASTM D-5199	Every roll	mils	36.0	54.0	72.0
Resin Density	ASTM D-1505	1/Batch	g/cc	< 0.926	< 0.92	< 0.926
Melt Index - 190/2.16 (max.)	ASTM D-1238	1/Batch	g/10 min	1.0	1.0	1.0
Sheet Density (8)	ASTM D-1505	Every 10 rolls	g/cc	≤ 0.939	≤ 0.939	≤ 0.939
Carbon Black Content (9)	ASTM D-4218	Every 2 rolls	%	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D-5596	Every 6 rolls	Category	Cat. 1 & Cat. 2	Cat. 1 & Cat. 2	Cat. 1 & Cat. 2
OIT - standard (avg.)	ASTM D-3895	1/Batch	min	140	140	140
HPOIT - High Pressure (avg)	ASTM D-5885	Per formulation	min	550	550	550
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls				
Strength at Break			ppi	170	240	320
Elongation at Break			%	900	900	900
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	lbf	22	33	44
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	lbf	70	100	130
Dimensional Stability	ASTM D-1204	Certification	%	± 2	± 2	± 2
Multi-Axial Tensile (min.)	ASTM D-5617	Per formulation	%	90	90	90
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation				
HP OIT (min. avg.)	ASTM D-5885		%	80	80	80
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation				
HP-OIT (min. avg.)	ASTM D-5885		%	60	60	60
<b>SUPPLY SPECIFICATIONS</b> (Roll dimensions may vary ±1%)						
Roll Dimension - Width	-		ft	22.3	22.3	22.3
Roll Dimension - Length	-		ft	780	520	400
Area (Surface/Roll)	-		sf	17,394	11,596	8,920

**NOTES**

1. Testing frequency based on standard roll dimensions and one batch is approximately 180,000 lbs (or one railcar).
2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.
8. Correlation table is available for ASTM D792 vs ASTM D1505. Both methods give the same results.
9. Correlation table is available for ASTM D1603 vs ASTM D4218. Both methods give the same results.

\* All values are nominal test results, except when specified as minimum or maximum.

\* The information contained herein is provided for reference purposes only and is not intended as a warranty of guarantee. Final determination of suitability for use contemplated is the sole responsibility of the user. SOLMAX assumes no liability in connection with the use of this information.

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PROPERTY	TEST METHOD	FREQUENCY <sup>(1)</sup>	UNIT Imperial	Solmax 840ST-3000	Solmax 860ST-3000	Solmax 880ST-3000	Solmax 900ST-3000
<b>SPECIFICATIONS</b>							
Thickness (min. avg.)	ASTM D-5994	Every roll	mils	40.0	60.0	80.0	100.0
Lowest individual for 10 out of 10 values			mils				90.0
Thickness (min.)	ASTM D-5994	Every roll	mils	36.0	54.0	72.0	
Asperity Height (min. avg.) (3)	ASTM D-7466	Every roll	mils	18	18	18	18
Resin Density	ASTM D-1505	1/Batch	g/cc	< 0.926	< 0.926	< 0.926	< 0.926
Melt Index - 190/2.16 (max.)	ASTM D-1238	1/Batch	g/10 min	1.0	1.0	1.0	1.0
Sheet Density (8)	ASTM D-1505	Every 10 rolls	g/cc	≤ 0.939	≤ 0.939	≤ 0.939	≤ 0.939
Carbon Black Content (9)	ASTM D-4218	Every 2 rolls	%	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D-5596	Every 6 rolls	Category	Cat. 1 & Cat. 2	Cat. 1 & Cat. 2	Cat. 1 / Cat.2	Cat. 1 & Cat. 2
OIT - standard (avg.)	ASTM D-3895	1/Batch	min	140	140	140	140
HPOIT - High Pressure (avg)	ASTM D-5885	Per formulation	min	550	550	550	550
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls					
Strength at Break			ppi	115	168	224	270
Elongation at Break			%	450	500	500	500
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	lbf	25	38	50	60
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	lbf	65	95	125	140
Dimensional Stability	ASTM D-1204	Certification	%	± 2	± 2	± 2	± 2
Multi-Axial Tensile (min.)	ASTM D-5617	Per formulation	%	60	60	60	90
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation					
HP OIT (min. avg.)	ASTM D-5885		%	80	80	80	80
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation					
HP-OIT (min. avg.)	ASTM D-5885		%	60	60	60	60
<b>SUPPLY SPECIFICATIONS</b> (Roll dimensions may vary ±1%)							
Roll Dimension - Width	-		ft	22.3	22.3	22.3	22.3
Roll Dimension - Length	-		ft	780	540	400	320
Area (Surface/Roll)	-		sf	17,394	12,042	8,920	7,136



# TECHNICAL DATA SHEET

## Solmax LLDPE Premium Single-Sided textured - Imperial Values

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PROPERTY	TEST METHOD	FREQUENCY <sup>(1)</sup>	UNIT Imperial	Solmax 840ST-3000	Solmax 860ST-3000	Solmax 880ST-3000	Solmax 900ST-3000
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### NOTES

1. Testing frequency based on standard roll dimensions and one batch is approximately 180,000 lbs (or one railcar).
2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.
3. ASTM D7466 is identical to GRI-GM12.
8. Correlation table is available for ASTM D792 vs ASTM D1505. Both methods give the same results.
9. Correlation table is available for ASTM D1603 vs ASTM D4218. Both methods give the same results.

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PROPERTY	TEST METHOD	FREQUENCY <sup>(1)</sup>	UNIT Imperial	Solmax 840T-3000	Solmax 860T-3000	Solmax 880T-3000	Solmax 500T-3000
<b>SPECIFICATIONS</b>							
Thickness (min. avg.)	ASTM D-5994	Every roll	mils	40.0	60.0	80.0	100.0
Thickness (min.)	ASTM D-5994	Every roll	mils	36.0	54.0	72.0	90.0
Asperity Height (min. avg.) (3)	ASTM D-7466	Every roll	mils	18	18	18	18
Resin Density	ASTM D-1505	1/Batch	g/cc	< 0.926	< 0.926	< 0.926	
Melt Index - 190/2.16 (max.)	ASTM D-1238	1/Batch	g/10 min	1.0	1.0	1.0	
Sheet Density (8)	ASTM D-1505	Every 10 rolls	g/cc	≤ 0.939	≤ 0.939	≤ 0.939	≥ 0.940
Carbon Black Content (9)	ASTM D-4218	Every 2 rolls	%	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D-5596	Every 6 rolls	Category	Cat. 1 & Cat. 2	Cat. 1 & Cat. 2	Cat. 1 & Cat. 2	Cat. 1 & Cat. 2
OIT - standard (avg.)	ASTM D-3895	1/Batch	min	140	140	140	160
HPOIT - High Pressure (avg)	ASTM D-5885	Per formulation	min	550	550	550	800
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls					
Strength at Yield			ppi				225
Elongation at Yield			%				13
Strength at Break			ppi	115	168	224	230
Elongation at Break			%	450	500	500	200
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	lbf	25	38	50	75
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	lbf	65	95	125	190
Dimensional Stability	ASTM D-1204	Certification	%	± 2	± 2	± 2	± 2
Stress Crack Resistance (SP-NCTL) (avg.)	ASTM D-5397	1/Batch	hr				1,000
Multi-Axial Tensile (min. avg.)	ASTM D-5617	Per formulation	%				15
Multi-Axial Tensile (min.)	ASTM D-5617	Per formulation	%	60	60	60	
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation					
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation (5)					
HP OIT (min. avg.)	ASTM D-5885		%	80	80	80	80
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation					
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation (5)					
HP-OIT (min. avg.)	ASTM D-5885		%	60	60	60	80
<b>SUPPLY SPECIFICATIONS</b> (Roll dimensions may vary ±1%)							
Roll Dimension - Width	-		ft	22.3	22.3	22.3	22.3
Roll Dimension - Length	-		ft	780	520	400	320
Area (Surface/Roll)	-		sf	17,394	11,596	8,920	7,040
Color (one side) (4)	-	-			White		

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PROPERTY	TEST METHOD	FREQUENCY <sup>(1)</sup>	UNIT Imperial	Solmax 840T-3000	Solmax 860T-3000	Solmax 880T-3000	Solmax 500T-3000
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**NOTES**

1. Testing frequency based on standard roll dimensions and one batch is approximately 180,000 lbs (or one railcar).
2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.
3. ASTM D7466 is identical to GRI-GM12.
4. Black or grey spots may be visible on the textured surface. Smooth edge may not have the same consistent shade of color as the membrane itself. The colored layer may cause the carbon black content results to be higher than 3%.
5. Certified by black formulation on geomembrane roll or molded plaque.
8. Correlation table is available for ASTM D792 vs ASTM D1505. Both methods give the same results.
9. Correlation table is available for ASTM D1603 vs ASTM D4218. Both methods give the same results.

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