

PROPERTY	TEST METHOD	FREQUENCY ⁽¹⁾	UNIT Metric	Solmax 820-2000	Solmax 830-2000	Solmax 840-2000	Solmax 860-2000	Solmax 880-2000	Solmax 900-2000
SPECIFICATIONS									
Thickness (min. avg.)	ASTM D-5199	Every roll	mm	0.50	0.75	1.00	1.50	2.00	2.50
Thickness (min.)	ASTM D-5199	Every roll	mm	0.45	0.675	0.90	1.35	1.80	2.25
Resin Density	ASTM D-1505	1/Batch	g/cc	< 0.926	< 0.926	< 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	1.0	1.0
Sheet Density (8)	ASTM D-1505	Every 2 rolls	g/cc	≤ 0.939	≤ 0.939	≤ 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	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	Cat. 1 / Cat. 2	Cat. 1 / Cat. 2
OIT - standard (avg.)	ASTM D-3895	1/Batch	min	100	100	100	100	100	100
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls							
Strength at Break			kN/m	13	20	28	40	56	66
Elongation at Break			%	700	750	800	800	800	800
2% Modulus (max.)	ASTM D-5323	Per formulation	kN/m	210	315	420	630	840	1050
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	N	50	70	100	150	200	250
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	N	124	200	276	408	547	620
Dimensional Stability	ASTM D-1204	Every 6 rolls	%	± 2	± 2	± 2	± 2	± 2	± 2
Multi-Axial Tensile (min.)	ASTM D-5617	Per formulation	%	30	30	30	30	30	30
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation							
STD OIT (min. avg.)	ASTM D-3895		%	35	35	35	35	35	35
HP OIT (min. avg.)	ASTM D-5885		%	60	60	60	60	60	60
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation							
HP-OIT (min. avg.)	ASTM D-5885		%	35	35	35	35	35	35
SUPPLY SPECIFICATIONS (Roll dimensions may vary ±1%)									
Roll Dimension - Width	-		m	6.80	6.80	6.80	6.80	6.80	6.80
Roll Dimension - Length	-		m	426.7	304.8	237.7	158.5	121.9	97.5
Area (Surface/Roll)	-		m ²	2901.6	2072.6	1616.4	1077.8	828.9	663.0

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.

PROPERTY	TEST METHOD	FREQUENCY ⁽¹⁾	UNIT Metric	Solmax 830ST-2000	Solmax 840ST-2000	Solmax 860ST-2000	Solmax 880ST-2000	Solmax 900ST-2000
SPECIFICATIONS								
Thickness (min. avg.)	ASTM D-5994	Every roll	mm	0.71	0.95	1.43	1.90	2.38
Lowest individual for 8 out of 10 values			mm	0.675	0.90	1.35	1.80	2.25
Lowest individual for 10 out of 10 values			mm	0.638	0.85	1.28	1.70	2.13
Asperity Height (min. avg.) (3)	ASTM D-7466	Every roll	mm	0.25	0.38	0.38	0.38	0.38
Resin Density	ASTM D-1505	1/Batch	g/cc	< 0.926	< 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	1.0
Sheet Density (8)	ASTM D-1505	Every 2 rolls	g/cc	≤ 0.939	≤ 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	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	Cat. 1 & Cat. 2
OIT - standard (avg.)	ASTM D-3895	1/Batch	min	100	100	100	100	100
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls						
Strength at Break			kN/m	9	17.5	23	30	26
Elongation at Break			%	250	400	400	400	250
2% Modulus (max.)	ASTM D-5323	Per formulation	kN/m	370	420	630	840	1050
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	N	70	111	160	220	250
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	N	150	250	373	495	500
Dimensional Stability	ASTM D-1204	Every 6 rolls	%	± 2	± 2	± 2	± 2	± 2
Multi-Axial Tensile (min.)	ASTM D-5617	Per formulation	%	30	30	30	30	30
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation						
STD OIT (min. avg.)	ASTM D-3895		%	35	35	35	35	35
HP OIT (min. avg.)	ASTM D-5885		%	60	60	60	60	60
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation						
HP-OIT (min. avg.)	ASTM D-5885		%	35	35	35	35	35
SUPPLY SPECIFICATIONS (Roll dimensions may vary ±1%)								
Roll Dimension - Width	-		m	6.80	6.80	6.80	6.71	6.71
Roll Dimension - Length	-		m	304.8	237.7	164.6	121.9	80.8
Area (Surface/Roll)	-		m ²	2072.6	1616.4	1119.3	817.9	542.2

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. Of 10 readings; 8 out of 10 must be >7 mils (0.18 mm), and lowest individual reading must be >5 mils (0.13 mm). 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 ⁽¹⁾	UNIT Metric	Solmax 830T-2000	Solmax 840T-2000	Solmax 860T-2000	Solmax 880T-2000	Solmax 900T-2000
SPECIFICATIONS								
Thickness (min. avg.)	ASTM D-5994	Every roll	mm	0.713	0.95	1.43	1.90	2.38
Lowest individual for 8 out of 10 values			mm	0.675	0.90	1.35	1.80	2.25
Lowest individual for 10 out of 10 values			mm	0.638	0.85	1.28	1.70	2.13
Asperity Height (min. avg.) (3)	ASTM D-7466	Every roll	mm	0.25	0.38	0.38	0.38	0.38
Resin Density	ASTM D-1505	1/Batch	g/cc	< 0.926	< 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	1.0
Sheet Density (8)	ASTM D-1505	Every 2 rolls	g/cc	≤ 0.939	≤ 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	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	Cat. 1 / Cat. 2
OIT - standard (avg.)	ASTM D-3895	1/Batch	min	100	100	100	100	100
Tensile Properties (min. avg) (2)	ASTM D-6693	Every 2 rolls						
Strength at Break			kN/m	9	17.5	23	30	26
Elongation at Break			%	250	400	400	400	250
2% Modulus (max.)	ASTM D-5323	Per formulation	kN/m	315	420	630	840	1050
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	N	71	111	160	220	250
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	N	150	250	373	495	500
Dimensional Stability	ASTM D-1204	Every 6 rolls	%	± 2	± 2	± 2	± 2	± 2
Multi-Axial Tensile (min.)	ASTM D-5617	Per formulation	%	30	30	30	30	30
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation						
STD OIT (min. avg.)	ASTM D-3895		%	35	35	35	35	35
HP OIT (min. avg.)	ASTM D-5885		%	60	60	60	60	60
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation						
HP-OIT (min. avg.)	ASTM D-5885		%	35	35	35	35	35
SUPPLY SPECIFICATIONS (Roll dimensions may vary ±1%)								
Roll Dimension - Width	-		m	6.80	6.80	6.80	6.71	6.71
Roll Dimension - Length	-		m	304.8	237.7	164.6	121.9	97.5
Area (Surface/Roll)	-		m ²	2072.6	1616.4	1119.3	817.9	654.2

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