SOLMAX

TECHNICAL DATA SHEET

Solmax HDPE Smooth - Metric Values

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(1)	UNIT Metric	Solmax 430-2000	Solmax 440-2000	Solmax 460-2000	Solmax 480-2000	Solmax 500-2000
SPECIFICATIONS								
Thickness (min. avg.)	ASTM D-5199	Every roll	mm	0.75	1.00	1.50	2.00	2.50
Thickness (min.)	ASTM D-5199	Every roll	mm	0.68	0.90	1.35	1.80	2.25
Resin Density	ASTM D-1505	1/Batch	g/cc	> 0.932	> 0.932	> 0.932	> 0.932	> 0.932
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	≥ 0.940	≥ 0.940	≥ 0.940	≥ 0.940	≥ 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	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 Yield			kN/m	11.5	15	22	31	37
Elongation at Yield			%	13	13	13	13	12
Strength at Break			kN/m	21	28	42	57	67
Elongation at Break			%	700	700	700	700	700
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	N	93	125	187	250	311
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	N	265	355	540	695	800
Dimensional Stability	ASTM D-1204	Certification	%	± 2	± 2	± 2	± 2	± 2
Stress Crack Resistance (SP-NCTL)	ASTM D-5397	1/Batch	hr	500	500	500	500	500
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation						
HP OIT (min. avg.)	ASTM D-5885		%	80	80	80	80	80
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation						
HP-OIT (min. avg.)	ASTM D-5885		%	50	50	50	50	50
SUPPLY SPECIFICATIONS	(Roll dimensions may vary ±1%)							
Roll Dimension - Width	-		m	6.80	6.80	6.80	6.80	6.80
Roll Dimension - Length	-		m	304.8	237.7	158.5	121.9	97.5
Area (Surface/Roll)	-		m²	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.
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SOLMAX

TECHNICAL DATA SHEET

Solmax HDPE Single-Sided Textured - Metric Values

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(1)	UNIT Metric	Solmax 430ST-2000	Solmax 440ST-2000	Solmax 460ST-2000	Solmax 480ST-2000	Solmax 500ST-2000
SPECIFICATIONS								
Nominal Thickness	-	-	mm	0.75	1.00	1.50	2.00	2.50
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	0.68	0.90	1.35	1.80	2.25
Lowest individual for 10 out of 10 values			mm	0.64	0.85	1.28	1.70	2.13
Asperity Height (min. avg.) (3)	ASTM D-7466	Every roll	mm	0.40	0.40	0.40	0.40	0.40
Resin Density	ASTM D-1505	1/Batch	g/cc	> 0.932	> 0.932	> 0.932	> 0.932	> 0.932
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	≥ 0.940	≥ 0.940	≥ 0.940	≥ 0.940	≥ 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	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. 3
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 Yield			kN/m	11	15.3	23	30	37
Elongation at Yield			%	12	13	13	13	12
Strength at Break			kN/m	8	15.3	23	29	26
Elongation at Break			%	100	150	150	150	100
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	N	93	130	200	267	311
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	N	200	400	534	667	667
Dimensional Stability	ASTM D-1204	Certification	%	± 2	± 2	± 2	± 2	± 2
Stress Crack Resistance (SP-NCTL)	ASTM D-5397	1/Batch	hr	500	500	500	500	500
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation						
HP OIT (min. avg.)	ASTM D-5885		%	80	80	80	80	80
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation						
HP-OIT (min. avg.)	ASTM D-5885		%	50	50	50	50	50
SUPPLY SPECIFICATIONS	(Roll dimensions may vary ±1%)							
Roll Dimension - Width	-		m	6.80	6.80	6.80	6.80	6.80
Roll Dimension - Length	-		m	304.8	237.7	170.7	134.1	97.5
Area (Surface/Roll)	-		m²	2072.6	1616.4	1160.8	911.9	663

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Solmax HDPE Single-Sided Textured - Metric Values

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PROPERTY	TEST METHOD	FREQUENCY(1)	UNIT Metric	Solmax 430ST-2000	Solmax 440ST-2000	Solmax 460ST-2000	Solmax 480ST-2000	Solmax 500ST-2000

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. Lowest individual and 8 out of 10 readings as per GRI-GM13 / 17, latest version.
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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Solmax HDPE Textured - Metric Values

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PROPERTY	TEST METHOD	FREQUENCY(1)	UNIT Metric	Solmax 430T-2000	Solmax 440T-2000	Solmax 460T-2000	Solmax 480T-2000	Solmax 500T-2000
SPECIFICATIONS								
Nominal Thickness	-	-	mm	0.75	1.00	1.50	2.00	2.50
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	0.68	0.90	1.35	1.80	2.25
Lowest individual for 10 out of 10 values			mm	0.64	0.85	1.28	1.70	2.13
Asperity Height (min. avg.) (3)	ASTM D-7466	Every roll	mm	0.40	0.40	0.40	0.40	0.40
Resin Density	ASTM D-1505	1/Batch	g/cc	> 0.932	> 0.932	> 0.932	> 0.932	> 0.932
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	≥ 0.940	≥ 0.940	≥ 0.940	≥ 0.940	≥ 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	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 Yield			kN/m	11.5	15.3	23	30	37
Elongation at Yield			%	12	12	13	13	12
Strength at Break			kN/m	11.5	15.3	23	29	26
Elongation at Break			%	150	150	150	150	150
Tear Resistance (min. avg.)	ASTM D-1004	Every 6 rolls	N	102	130	200	267	311
Puncture Resistance (min. avg.)	ASTM D-4833	Every 6 rolls	N	265	400	530	667	667
Dimensional Stability	ASTM D-1204	Certification	%	± 2	± 2	± 2	± 2	± 2
Stress Crack Resistance (SP-NCTL)	ASTM D-5397	1/Batch	hr	500	500	500	500	500
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation						
HP OIT (min. avg.)	ASTM D-5885		%	80	80	80	80	80
UV Resistance - % retained after 1600 hr	GRI-GM-11	Per formulation						
HP-OIT (min. avg.)	ASTM D-5885		%	50	50	50	50	50
SUPPLY SPECIFICATIONS	(Roll dimensions may vary ±1%)							
Roll Dimension - Width	-		m	6.80	6.80	6.80	6.80	6.80
Roll Dimension - Length	-		m	304.8	237.7	164.6	128.0	97.5
Area (Surface/Roll)	-		m²	2072.6	1616.4	1119.3	870.4	663

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PROPERTY	TEST METHOD	FREQUENCY[1]	UNIT Metric	Solmax 430T-2000	Solmax 440T-2000	Solmax 460T-2000	Solmax 480T-2000	Solmax 500T-2000

NOTES

1. Testing frequency based on standard roll dimensions and one batch is approximately 180,000 lbs (or one railcar).
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3. Lowest individual and 8 out of 10 readings as per GRI-GM13 / 17, latest version.
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