PT. Bright Spark Indonesia

- CORROSION PREVENTION SYSTEM
- JETTY REPAIR
- FOX GROUTING SYSTEM
- MODULAR FLOATING PONTOON

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TECHNICAL DATA SHEET - Geomembrane HDPE Smooth

PROPERTY	TEST METHOD	FREQUENCY [1]	UNIT	Solmax 420-9000	Solmax 430-9000	Solmax 440-9000	Solmax 460-9000	Solmax 480-9000	Solmax 500-9000
SPECIFICATIONS									
Thickness (min. avg.)	ASTM D-5199	Every roll	mm	0.5	0.75	1.0	1.5	2.0	2.5
Thickness (min.)	ASTM D-5199	Every roll	mm	0.45	0.68	0.9	1.35	1.8	2.25
Resin Density	ASTM D-1505	1/Batch	g/cc	> 0.932	> 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	1.0
Sheet Density	ASTM D-792	Every 2 rolls	g/cc	> 0.94	> 0.94	> 0.94	> 0.94	> 0.94	> 0.94
Carbon Black Content	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 10 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
Oxidation Induction Time (min. ave)	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 Yield			kN/m	8	11	15	23	31	37
Elongation at Yield			%	13	13	13	13	13	12
Strength at Break			kN/m	14	21	28	43	57	67
Elongation at Break			%	700	700	700	700	700	700
Tear Resistance (min. avg.)	ASTM D-1004	Every 4 rolls	N	65	93	130	187	250	311
Puncture Resistance (min. avg.)	ASTM D-4833	Every 4 rolls	N	176	265	355	540	705	800
Dimensional Stability	ASTM D-1204	Per formulation	%	± 2	± 2	± 2	± 2	± 2	± 2
Stress Crack Resistance (SP-NCTL)	ASTM D-5397	1/Batch	hr	400	400	400	400	400	300
Oven Aging - % retained after 90 days	ASTM D-5721	Per formulation							
HP OIT (min. avg.)	ASTM D-5885		%	80	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	50
SUPPLY SPECIFICATIONS *(Roll dimensions may vary ±1%)*									
Roll Dimension - Width	-		m	8.00	8.00	8.00	8.00	8.00	8.00
Roll Dimension - Length	-		m	420.0	280.0	210.0	140.0	105.0	85.0
Area (Surface/Roll)	-		m	3,360	2,240	1,680	1,120	840	680

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.

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