

SAFETY & SECURITY FILMS PHYSICAL PROPERTIES	Thickness, Inches	Thickness, Micron	Appearance	Structure, plies	Tensile Strength MD	Tensile Strength TD	Break Strength MD	Break Strength TD	Elongation at Break MD	Elongation at Break TD	Peel Strength	Puncture Strength	Tear Strength MD	Tear Strength TD	Tear Strength per inch thickness MD	Tear Strength per inch thickness TD
	2M Clear	0.002	50	Clear	Single	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4M Clear	0.004	100	Clear	Single	22,732	24,915	93	102	138	106	3.36*	65.1	14.2	13.8	3,454	3,375
7M Clear	0.007	175	Clear	Single	20,450	24,160	149	178	149	129	3.36*	118.0	26.3	26.1	3,656	3,622
8M Clear	0.008	200	Clear	Multi	22,174	31,174	184	255	164	98	3.36*	153.3	27.8	28.6	3,396	3,483
13M Clear	0.013	325	Clear	Multi	19,180	21,643	268	297	171	163	3.36*	212.3	45.9	48.0	3,328	3,475
5M Symmetry 15	0.005	125	Dark Warm Gray	Multi	17,218	23,334	98	137	148	121	3.36*	91.1	16.4	16.2	2,875	2,837
9M Symmetry 15	0.009	225	Med Warm Gray	Multi	17,045	22,763	175	237	127	170	3.36*	148.1	29.4	29.3	2,935	2,934
5M Symmetry 25	0.005	125	Dark Warm Gray	Multi	18,440	23,439	109	135	140	135	3.36*	96.2	15.6	15.3	2,733	2,690
9M Symmetry 25	0.009	225	Med Warm Gray	Multi	17,360	22,204	177	236	176	168	3.36*	146.8	28.9	29.3	2,862	2,904
5M Silver 20	0.005	125	Silver Reflective	Multi	16,418	21,590	96	123	172	144	3.36*	103.1	17.2	16.5	3,014	2,899
9M Silver 20	0.009	225	Silver Reflective	Multi	16,070	20,570	166	207	171	137	3.36*	143.4	29.6	28.8	2,964	2,878

Test Methods and Units:

N/A - Data not available

Tensile Strength	ASTM D882	Pounds per square inch, psi
Break Strength	ASTM D882	Pounds force, lbf
Elongation at Break	ASTM D882	Percent, %
Peel Strength	ASTM D3330	Pounds per inch width, lb/in
Puncture Strength	ASTM D4830	Pounds force, lbf
Tear Strength	ASTM D1004	Pounds force
Tear Strength	ASTM D1004	Pounds force per inch thickness, lbf/in

*Value from 4M film test, thicker films cannot be accurately tested as film thickness affects results.

All values above are results from independent lab testing. Reported values are taken from representative product samples and are subject to normal manufacturing variances. 4M, 7M, 8M and 13M comply with ANSI Z97.1/CPSC impact test requirements. Test reports available on request.

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