

LLUMAR MAGNUM SAFETY/SECURITY FILMS: PHYSICAL PROPERTIES

	FILM THICKNESS (inches)	APPEARANCE	SINGLE OR MULTI-PLY	TENSILE STRENGTH (as constructed)	TENSILE STRENGTH (as reported by Polyester Supplier - average)	BREAK STRENGTH	ELONGATION AT BREAK	PEEL STRENGTH	PUNCTURE STRENGTH
SCL SR PS4	0.004	Clear	Single	33,100	32,000	132	> 100%	>2720 (>6)	79
SCL SR PS6	0.006	Clear	Multi	28,900	32,000	173	> 100%	>2720 (>6)	111
SCL SR PS7	0.007	Clear	Single	27,614	32,000	193	> 100%	>2720 (>6)	145
SCL SR PS8	0.008	Clear	Multi	29,505	32,000	235	> 100%	>2720 (>6)	156
SCL SR PS11	0.011	Clear	Multi	27,318	32,000	301	> 100%	>2720 (>6)	187
SCL SR PS15	0.015	Clear	Multi	23,345	32,000	373	> 100%	>2720 (>6)	223
R-30B SR PS4	0.004	Bronze	Multi	25,714	32,000	101	> 100%	>2720 (>6)	78
R-30G SR PS4	0.004	Gray	Multi	25,714	32,000	101	> 100%	>2720 (>6)	78
R-20 SR PS4	0.004	Silver Reflective	Multi	25,714	32,000	101	> 100%	>2720 (>6)	78
R-35 SR PS4	0.004	Silver Reflective	Multi	25,714	32,000	101	> 100%	>2720 (>6)	78
N-1020 SR PS4	0.004	Dark Neutral	Multi	25,714	32,000	101	> 100%	>2720 (>6)	78
N-1040 SR PS4	0.004	Medium Neutral	Multi	25,714	32,000	101	> 100%	>2720 (>6)	78
N-1050 SR PS4	0.004	Light Neutral	Multi	25,714	32,000	101	> 100%	>2720 (>6)	78
NUV-65 SR PS4	0.004	Very Light Neutral	Multi	25,714	32,000	101	> 100%	>2720 (>6)	78
N-1020 SR PS8	0.008	Dark Neutral	Multi	29,505	32,000	235	> 100%	>2720 (>6)	164
N-1040 SR PS8	0.008	Medium Neutral	Multi	29,505	32,000	235	> 100%	>2720 (>6)	164
N-1050 SR PS8	0.008	Light Neutral	Multi	29,505	32,000	235	> 100%	>2720 (>6)	164
R-20 SR PS8	0.008	Silver Reflective	Multi	29,505	32,000	235	>100%	>2720 (>6)	164

Property	Test Method	Units
Film Thickness		Inches
Tensile Strength	ASTM D882	Pounds per square inch, psi
Break Strength	ASTM D882	Pounds force per inch width
Elongation At Break	ASTM D882	Percent
Peel Strength	ASTM D3330	Grams per inch width (pounds per inch width)
Puncture Strength	ASTM D4830	Pounds force

All Llumar Magnum films comply with ANSI Z97.1 impact test requirements on 1/8" and 1/4" glass.

All Clear Safety Films comply with CPSC 16CFR1201 Cat II impact requirements on 1/8" glass.

SCL SR PS7, SCL SR PS8, SCL SR PS11 and SCL SR PS15 comply with CPSC 16CFR1201 Cat II impact requirements on 1/4" glass.

Llumar Magnum films with a Scratch Resistant coating (SR in film name) tested using ASTM D-1044, using 500g weights and CS-10F wheel have shown less than 5% increase in haze after abrasion.

All Llumar Magnum films utilize an acrylic pressure sensitive adhesive system.

Data values are typical and provided for comparison purposes only.

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