SUNGUARD
WINDOW FILMS

SPECIFICATION.

WINDOW FILM TYPE: SAFETY & SECURITY - CLEAR

SAFETY & SECURITY.

Sunguard Safety and Security Window Films, are fabricated with a super resilient layer of high-tensile polyester and aggressive adhesives to provide exceptional impact resistant capabilities. Constructed with a durable scratch resistant coating for easy cleaning.

PHYSICAL PROPERTIES NOMINAL.

Nom. Thickness:
4 Mil - 100/125 microns
8 Mil - 200/235 microns
10 Mil - 250/300 microns
12 Mil - 350/400 microns
Tensile strength: 2,100 kg/cm2
Melting point: 260 – 265°C

*Infrared rejection = 1 - average unweighted transmittance using ASTM E 903.

**Tdw-ISO is the percentage of transmitted light that causes fading. A lower number means more protection against fading.

***EN356 IGU P3A 4mm Toughened/12mm/4mm Toughened or EN356 IGU P3A Lamell.

All window films meet classification B-S1,d0 (tests acc to SBI EN13823) and class M1 (tests acc.to NF P 92-501).

EN 356 | EN 12600 | ISO 16933 | GSA ASTM | CSTB M1 EN 45545 EN 13501

PERFORMANCE PARAMETERS FOR DIFFERENT WINDOW TYPES	4 MIL CLEAR		8 MIL CLEAR		10 MIL CLEAR		14 MIL CLEAR	
	4MM SINGLE CLEAR	4/12/4MM DOUBLE CLEAR	4MM SINGLE CLEAR	4/12/4MM DOUBLE CLEAR	4MM SINGLE CLEAR	4/12/4MM DOUBLE CLEAR	4MM SINGLE CLEAR	4/12/4MM DOUBLE CLEAR
VISIBLE LIGHT.								
Transmittance %	87	79	87	79	87	79	87	79
SOLAR ENERGY.								
Infrared rejection @780 - 2500 nm %*	29	28	20	28	20	28	20	28
Ultraviolet light blocked @300 to 380 nm %	>99	>99	>99	>99	>99	>99	>99	>99
Fade control UV Tdw-ISO @300 - 700 nm %**	62	56	62	56	62	56	62	56
Fade reduction %	27	24	27	24	27	24	27	24
PHYSICAL PROPERTIES.								
Tnom/T (µm) Nominal/overall thickness	100/125		200/235		250/300		350/400	
Tensile strength - kg/cm²	2110		2110		2110		2110	
Elongation	>100%		>100%		>100%		>100%	
Peel strength - g/cm	>985		>985		>985		>985	
Yield strength - kg/cm² (at 5%)	10.8		21.6		27.0		37.8	
Break strength - kg/cm	22.0		44.0		55.0		77.0	
Tear strength - kg (Graves)	3.0		6.0		7.5		10.5	
Puncture strength – kg	30.0		64.0		80.0		105.0	
SAFETY TESTING.								
EN 12600 Human impact	2B2		1B1		1B1		1B1	
EN 356 Resistance to manual attack	N/A		P1A		P2A		P2A/P3A***	
ISO 16933, GSA or ASTM Bomb blast resistance	N/A		Y		Y		Y	