

Product Features and Benefits

- Combination safety/ solar control window film
- Help protect from broken glass hazards
- Increase privacy, reduce glare and eye discomfort
- Increase comfort and reduce air conditioning costs
- Helps extend the life of furnishings by significantly reducing harmful UV rays

Applications

- Bomb Blast Protection
- Building Envelope Protection
- Helping to Deter Break & Entry
- Safety Glazing
- Spontaneous Glass Breakage
- Seismic Preparedness

Performance Testing

Method	Glass Substrate	Film Attachment	Rating	
Safety Glazing				
16 CFR 1201	¼" annealed	--	Category 2, 400 ft-lbs	
ANSI Z97.1			Class A (Unlimited), 400 ft-lbs	
Impact Resistance				
ASTMs E1886 / E1996	¼" tempered	IPA	Missile Level A, +/- 60 psf	
Blast Mitigation				
GSA TS01-2003 / ASTM F1642	¼" annealed	IPP	6 psi, 28 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"
		IPA	6 psi, 42 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"
	¼" tempered	IPA	4 psi, 28 psi*msec	GSA Level 2 / ASTM "No Hazard"
	1" double pane (annealed)	IPA	6 psi, 42 psi*msec	GSA Level 2 / ASTM "No Hazard"

Glazing systems vary. Contact 3M for more information.

Film Properties (nominal)

Film Thickness	8 mils
Film Construction	Laminated conventional PET
Tensile Properties (ASTM D882)	
Tensile Strength	22,000 psi (MD) / 30,000 psi (TD)
Break Strength	159 lb/in (MD) / 247 lb/in (TD)
Elongation at Break	95% (MD) / 76% (TD)
Yield Strength	>12,000 psi
Elongation at Yield	>3%
Modulus	607 kpsi
Abrasion Resistance (ASTM D1044)	+3% Δ Haze
Peel Strength	4.5 lb/in
Flammability (ASTM E84)	Class A

Solar Properties – film applied to ¼" glass				
	¼" Clear	¼" Tint	Dual Clear	Dual Tint
VLT	17%	10%	16%	9%
VLR-Int	58%	58%	58%	58%
VLR-Ext	56%	23%	55%	23%
SHGC	0.23	0.27	0.33	0.27
TSER	77%	73%	67%	73%
UV Block	99%	99%	99%	99%
Glare ↓	81%	85%	78%	82%
U-Value	0.91	0.91	0.46	0.46
Solar Heat ↓	72%	58%	53%	47%

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Commercial Solutions Division

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