

Data Sheet

SafetyShield G2 800

SAFETYSHIELD® G2
BY MADICO

Tested to Protect Against:



Accidental Breakage



Natural Disasters



Forced Entry



Acts of Terrorism



School Threats

SafetyShield® by Madico is the world's clearest, most rigorously tested, and now strongest safety and security film system with the advanced SafetyShield G2 series. Keeping glass in place to protect people and property from breakage, disasters, forced entry, and even terrorism, SafetyShield is trusted worldwide in government facilities, schools, businesses and homes.

Physical Properties

Test	Unit	Result
Standard ASTM D 6988 Determination of Thickness		
Film Thickness	Inch	0.0095
	Micron	240
Structural Component	Inch	0.008
	Micron	200
Standard ASTM D 882 Tensile Properties		
Longitudinal Tensile Strength	psi (lbs/inch ²)	29,000
	MPa	200
Transverse Tensile Strength	psi (lbs/inch ²)	34,000
	MPa	235
Break Strength	lbs / inch width	250
	N / 2.54 cm width	1120
Longitudinal Elongation at Break	%	160
Transverse Elongation at Break	%	130
Yield Strength	psi – Ave MD / TD	14,000
	MPa – Ave MD / TD	96
Elongation at Yield	%	5
Standard ASTM D 3330 Peel Adhesion		
Peel Strength	lbs / inch width	10 – 12
	kg / 2.5 cm width	4.5 – 5.5
Standard ASTM D 1044 Resistance to Surface Abrasion		
Abrasion Resistance (Δ Haze 100 cycles)	%	< 5
Standard ASTM D 4833 Puncture Resistance		
Puncture Resistance	Newtons	485
	Pounds	109
Standard ASTM D 1004 Tear Resistance (Graves Tear)		
Graves Tear Machine Direction	Newtons	121
	Pounds	27.1
Graves Tear Transverse Direction	Newtons	122
	Pounds	27.5
Standard ASTM D 2582 Puncture-Propagation Tear Resistance		
Puncture Propagation Tear Resistance (MD)	Newtons	36.0
	Pounds	8.1
Puncture Propagation Tear Resistance (TD)	Newtons	37.9
	Pounds	8.5
Standard ASTM E 84 Surface Burning Characteristics		
International Building Code / NFPA Life Safety Code	Flame Spread Index	Class A
	Smoke Developed Index	Class A

*Near IR range (780-2500nm)

Performance measurement definitions can be found at www.madico.com. Read in accordance with National Fenestration Rating Council (NFRC) standards on 6mm clear glass. Independent test reports available upon request.

Specification Use Statement

Reported values are typical properties and should not be used as a specification. Since the user is aware of the specific conditions in which the product is to be used, it is the user's responsibility to determine whether the product is suitable for intended use. If you need verification regarding specific use or additional information, please contact Madico Window Films or your local Madico Authorized Dealer. Since there can be variations in published data between printed materials, please visit madico.com for the latest reported performance measurements.

Performance Measurements

Property	1/8" (3mm) Clear	Dual 1/8" (3mm) Clear	1/4" (6mm) Clear	Dual 1/4" (6mm) Clear
Visible Light				
Transmitted	88%	80%	87%	78%
Reflected Out	10%	16%	10%	16%
Reflected In	10%	16%	9%	16%
Glare Reduction	2%	2%	2%	2%
Solar Energy				
Transmitted	80%	68%	74%	59%
Reflected Out	9%	14%	8%	12%
Absorbed	11%	10%	18%	15%
Ultraviolet Light				
Rejection (300 to 380 nm)	>99%	>99%	>99%	>99%
Tdw-ISO (300 to 700 nm)	63%	57%	62%	56%
Fade Reduction	25%	23%	23%	21%
Infrared Light				
Infrared Rejection*	26%	40%	34%	52%
Infrared Energy Rejection	18%	29%	24%	36%
Thermal Performance				
U Factor	1.07	0.56	1.05	0.48
Emissivity	0.90	0.90	0.90	0.90
Shading Coefficient (SC)	0.96	0.86	0.92	0.81
Solar Heat Gain Coefficient (SHGC)	0.84	0.75	0.80	0.70
Total Solar Energy Rejected (TSER)	16%	25%	20%	30%
Light to Solar Gain (LSG)	1.05	1.07	1.09	1.11

Test Data

Test	Condition	Result
Standard ANSI Z97.1 Safety Glazing Materials		
Safety Glazing	ANSI Z 97.1	Class A
	CPSC 16 CFR Part 1201	Category II
Standard ASTM F 1642 / F 2912 Blast Mitigation		
Daylight (No Attachment)	4psi / 28psi-ms 28 kPa / 193 kPa-ms	H4 Low Hazard
Wet Glaze (Structural silicone bead)	4psi / 28psi-ms 28 kPa / 193 kPa-ms	H2 Minimal Hazard
Wet Glaze (Structural silicone bead)	6psi / 42psi-ms 41 kPa / 290 kPa-ms	H3 Very Low Hazard
Mechanical (4 side FrameGard®)	6psi / 42psi-ms 41 kPa / 290 kPa-ms	H3 Very Low Hazard
Standard EN 356 Resistance Against Manual Attack		
Anti-Intrusion / Security Glazing	6mm (1/4 inch) Annealed	P1A