

Data Sheet

SafetyShield 800

SAFETYSHIELD®
BY MADICO



Top: A category C blast load, 4psi 30psi/ms is detonated.

Middle: Shock wave breaking untreated window. Glass fragments are blown into the building creating a deadly hazard.

Bottom: Shock wave hitting treated window with SafetyShield 800 and four-sided FrameGard attachment system. Performs to GSA conditions 2.

Test Data:

Impact:

ANSI Z-97.1 Unlimited
CPSC 16 CFR Part 1201 Category II

Wind-borne Debris:

ASTM E-1886/E-1996 Large Missile Impact
Category B, 4-1/2 lb, 2' x 4'

Wind Storm: +/-100 psf
Tested on 3/16" tempered patio door with silicone wet glaze attachment to ASTM E-1886/E-1996.

Blast Mitigation:

Attachment System GSA Performance Condition
4 Side FrameGard® 2*
2 Side FrameGard® 2
4 Side Structural Silicone Bead 3A
Day Light (No Attachment) 3B

Subjected to GSA category C blast loads, 4psi 30psi/ms minimum on 1/4" annealed glass. By ABS/EQE International and Grendon Design Agency.

* SafetyShield 800 with 4 side FrameGard received a GSA Category 2 when subjected to 9.19 PSI and 64.53 PSI/ms, and a Category 3B when subjected to 12.78 PSI and 78.79 PSI/ms blast loads. These loads far surpass the GSA criteria of 4 PSI and 28 PSI/ms.

Accelerated Weathering:

Miami/Dade Criteria, 4500 hours Pass
Xenon Arc Per: ASTM G26-95 Pass
ANSI Z-97.1 Pass

Puncture Strength:

ASTM D-4830-88 129 lbs.

Tear Strength:

ASTM D-1004 >18 lbs.
ASTM D-2582 33 Average Tear Force (Newtons)

Surface Burn Characteristics ASTM E-84:

Flame Spread Index "A" Rating
Smoke Developed Index. "A" Rating

Ignition Properties ASTM D-1929-96:

Flash Ignition Temp. 760°F
Self-Ignition Temp. 880°F

Properties:

Visible Light:

Transmitted % 87.0
Reflected Exterior % 9.0
Reflected Interior % 10.0
Glare Reduction % 2.0

Total Solar Energy:

Transmitted % 74.0
Reflected % 8.0
Absorbed % 18.0

Shading Coefficient 0.92
Solar Heat Gain Coefficient 0.80
U Factor 1.05
Ultraviolet Rejection % Exceeds 99.0
Emissivity 0.90
Light to Solar Gain 1.09
Total Solar Energy Rejection % 20.0
Infrared Rejection %* 34.0
Infrared Energy Rejection % 24.0

Physical Properties:

Film Thickness 0.0095"
Structural Component 0.008"
Structure Multi-Ply Laminate
Adhesive Type Acrylic Pressure Sensitive
Long. Tensile Strength 28,000 PSI
Traverse Tensile Strength 36,000 PSI
Break Strength 240 Pounds Per Inch (Width)
Longitudinal Elongation at Break 150%
Traverse Elongation at Break 100%
Yield Strength 14,000 PSI Avg. MD/TD
Elongation at Yield 120%
Peel Strength 5 to 6 Pounds Per Inch

Read in accordance with National Fenestration Rating Council (NFRC) standards on 4mm (0.16") clear glass.

* Near IR range (780-2500nm)
Technical specification definitions can be found at www.safetyshield.com.

Reported values are typical properties and should not be used as a specification. Since only 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 that intended use. If the specific conditions of use are critically dependent on any of the properties of the product, or if you need further information, contact Madico Technical Services.

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