3M™ Scotchshield™ Safety & Security Window Film Ultra S800

Technical Data Sheet
Revision G, January 2025

IMPORTANT: This Technical Data Sheet provides an overview of the specified product's performance. Prior to product selection, always refer to the current 3M Technical Specifications for more detailed product information and specifications. All technical data and information in this data sheet should be considered representative or typical only and should not be used for specification purposes.

Product Description

- Micro-layered film designed for tear resistance and glass fragment retention
- Optically clear
- For application only to interior glass surfaces of windows and doors
- Engineered to help hold broken glass in place
- Helps prevent flying glass shards from harming occupants and damaging property
- Blocks up to 99% of the sun's UV rays, the largest single cause of fading

Applications

- Helps prevent flying glass shards in the following applications:
  - Spontaneous Glass Breakage
  - Break and Entry Incidents
  - Seismic Events
  - Intentional and Accidental Explosions (intended only for applications to commercial and non-educational government facilities)
  - Windstorms
- Helps delay intruders in break and entry incidents
- Helps protect against ultraviolet (UV) fading
- Helps meet many industry performance standards for glass fragment retention

Product must be installed with the 3M™ Impact Protection Attachment (IPA) Sealant for all windstorm, break & entry, and explosion mitigation applications and for all spontaneous glass breakage applications on single pane tempered glass. **THE PRODUCT IS NOT BULLETPROOF AND IS NOT DESIGNED TO STOP INTRUDERS.**

Product must be installed strictly in accordance with 3M Technical Specifications and 3M instructions.

Product Properties

Film Thickness	8 mils (203µ) nominal *
Film Construction	Micro-layered
Tensile Properties (ASTM D882)	
Tensile Strength	31,500 psi
Break Strength	253 lbs/in
Elongation at Break	135%
Yield Strength	15,000 psi
Elongation at Yield	8%
Modulus	520 kpsi
Other Physical Properties	
Graves Area Tear Resistance (ASTM D1004)	1,100 lbs% (MD) /1,050 lbs% (TD)
Puncture-Propagation-Tear Resistance (ASTM D2582)	10 lbf (MD) / 12 lbf (TD)
Puncture Strength (ASTM D4830)	183 lbf
Abrasion Resistance (ASTM D1044)	<5% Δ haze
Peel Strength (ASTM D3330)	6 lbs/in
Flammability (ASTM E84)	Class A
Solar Properties – *film applied to ¼" clear glass*	
Visible Light Transmitted	88%
UV Light Rejected	99%

* Total thickness with adhesive is 9mils (230)

Performance Testing

Method	Glass Substrate	Film Attachment *	Blast Load	GSA Performance Condition ASTM Hazard Rating
Blast Mitigation				
GSA TS01-2003 ASTM F1642	¼" annealed	IPA	6 psi, 42 psi msec	GSA 3a ASTM F1642 "Minimal Hazard"
GSA TS01-2003 ASTM F1642	¼" annealed	IPA	7.5 psi, 55 psi msec	GSA 3a ASTM F1642 "Low Hazard"
GSA TS01-2003 ASTM F1642	1" double pane annealed	IPA	6 psi, 42 psi msec	GSA 2 ASTM F1642 "Minimal Hazard"

Method	Glass Substrate	Film Attachment *	Blast Load	GSA Performance Condition ASTM Hazard Rating
Blast Mitigation				
GSA TS01-2003 ASTM F1642	1" double pane annealed	IPA	9 psi, 70 psi msec	GSA 3b ASTM F1642 "Low Hazard"
GSA TS01-2003 ASTM F1642	1" double pane tempered	IPA	9 psi, 70 psi msec	GSA 2 ASTM F1642 "Minimal Hazard"
GSA TS01-2003	1" double pane tempered	IPA	10 psi, 75 psi msec	GSA 2 ASTM F1642 "Minimal Hazard"
GSA TS01-2003 ASTM F1642	1" double pane tempered	IPA (2 sides)	6.8 psi, 47 psi msec	GSA 3a ASTM F1642 "Very Low Hazard"
GSA TS01-2003 ASTM F1642	¼" tempered	IPA (2 sides)	6.5 psi, 40 psi msec	GSA 3a ASTM F1642 "Very Low Hazard"
GSA TS01-2003	¼" tempered	IPA	7.6 psi, 51 psi msec	GSA 2 ASTM F1642 "Minimal Hazard"
GSA TS01-2003	1" double pane annealed	IPA (2 sides)	6.84 psi, 45 psi msec	GSA 3b ASTM F1642 "Low Hazard"

Method	Glass Substrate	Film Attachment*	Rating
Safety Glazing			
ANSI Z97.1	¼" & 1/8" annealed		Class A (Unlimited), 400 ft-lbs and Class B (Unlimited), 150 ft-lbs
Impact Resistance			
ASTMs E1886 / E1996	¼" tempered	IPA	Missile Level C +/- 75 psf
ASTMs E1886 / E1996		IPA	Missile Level A +/- 75 psf

* IPA = 3M™ Impact Protection Attachment (IPA) Sealant, all 4 sides unless otherwise noted.

Health & Safety

⚠ **WARNING**. To help reduce the risk of personal injury and/or property damage associated with glass breakage, when working on or near glass surfaces, always use appropriate personal protective equipment and follow the Technical Bulletin "3M™ Window Film Glass Checklist" to identify the risk of glass breakage associated with the application of window film to glass surfaces.

⚠ **CAUTION**. When using any equipment, tools, or cleaning solutions in connection with the processing and application of this Product, always follow the manufacturer's container labels and/or instructions for safe operation.

Important Product Notices

CAUTION: While 3M™ Window Films, when applied in accordance with 3M instructions, may help reduce the impact of flying glass shards under certain conditions and potentially delay intruders, **THESE FILMS DO NOT PREVENT PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH. WINDOW FILMS ARE NOT BULLETPROOF AND NOT DESIGNED TO STOP INTRUDERS.**

CAUTION: Although certain 3M™ Window Films help block a certain percentage of UVA and UVB radiation and may have received The Skin Cancer Foundation Seal of Recommendation, the efficacy of these films in protecting against skin cancer has not been tested by 3M and **3M™ WINDOW FILMS DO NOT PREVENT SKIN CANCER.**

IMPORTANT PRODUCT AND APPLICATION LIMITATIONS: Many factors can contribute to potential hazards and damages arising from wind, impact, seismic, explosion, or break and entry incidents, including the window film selected, type and thickness of glass, building construction, exterior pressure, proximity of impact occurrence, quality of window or door frames, intruder size and strength, and type of tools used to gain entry. Certain 3M™ Window Films require the use of 3M™ Impact Protection Attachment (IPA) Sealant on glass window and door frames for windstorm, break & entry, and explosion mitigation applications and for spontaneous glass breakage applications on single pane tempered glass. The sealant may also be recommended for certain other spontaneous glass breakage, safety glazing, and seismic applications. Always refer to the 3M Technical Data Sheets and 3M

Technical Specifications to determine whether these combinations are required. **Always consult with security professionals and a 3M Authorized Window Film Dealer prior to selecting any window films to determine suitability for the intended application.**

IMPORTANT STATE OF FLORIDA NOTICE: This product is not approved in the State of Florida for use as hurricane, windstorm, or impact protection from wind-borne debris from a hurricane or windstorm. In compliance with Florida Statute 553.842, this product may not be advertised, sold, offered, provided, distributed, or marketed in the State of Florida as hurricane, windstorm, or impact protection from wind-borne debris from a hurricane or windstorm.

Warranty Information

Technical Information: Technical information, guidance, and other statements provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license to any intellectual property rights is granted or implied with respect to this technical information.

Product Selection and Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment, reviewing all applicable regulations and standards, and reviewing the product label and use instructions. Failure to properly evaluate, select, and use a 3M product in accordance with instructions or to meet all applicable safety regulations may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer: Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. Please refer to the Warranty Bulletin for 3M™ Window Films (Flat Glass Applications) and 3M™ Impact Protection Attachment (IPA) Sealant for complete details on warranty coverage, which can be obtained by contacting your 3M Authorized Window Film Dealer or your local 3M sales representative. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

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PROTECTION

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