3M™ Scotchshield™ Safety & Security Window Film Ultra Night Vision S25

Technical Data Sheet
Revision E, 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

- Combination safety and security / solar control window film
- Micro-layered film designed for tear resistance and glass fragment retention
- Tinted film (25% Visible Light Transmission) with solar heat rejection properties
- Low interior reflectivity offers enhanced views outward at night
- 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 nominal
Film Construction	Micro-layered Laminated
Tensile Strength	28,500 psi (MD) / 26,000 psi (TD)
Break Strength	230 lbs/in (MD) / 210 lbs/in (TD)
Elongation at Break	145% (MD) / 140% (TD)
Yield Strength	16,000 psi (MD)
Elongation at Yield	8%
Modulus	575 kpsi
Abrasion Resistance (ASTM D1044)	< 3% Δ Haze
Peel Strength (ASTM D3330)	4.1 lb/in
Flammability (ASTM E84)	Class A
Graves Area Tear Resistance (ASTM D1004)	1,200 lbs% (MD) /950 lbs% (TD)
Puncture-Propagation-Tear (ASTM D2582)	11 lbf
Puncture Strength (ASTM D4830)	207 lbf

Solar Properties (film applied to ¼" glass)

	¼" Clear	¼" Tint	Dual Clear	Dual Tint
Visible Light Transmission (VLT)	25%	14%	22%	13%
Visible Light Reflectance (VLR) -Interior	10%	10%	10%	10%
Visible Light Reflectance (VLR)-Exterior	25%	12%	28%	13%
Solar Heat Gain Coefficient (SHGC)	0.38	0.36	0.47	0.37
Total Solar Energy Rejected (TSER)	62%	64%	53%	63%
UV Block	>99.9%	>99.9%	>99.9%	>99.9%
Glare ↓	72%	72%	72%	72%
U-Value	1.04	1.02	0.48	0.48
Solar Heat ↓	54%	43%	33%	28%

Performance Testing

Method	Glass Substrate *	Film Attachment **	Rating	
Safety Glazing / Impact Rating				
ANSI Z97.1	1/8" and 1/4" annealed	--	Class A (Unlimited), 400 ft-lbs and Class B (Unlimited), 150 ft-lbs	
Impact Resistance				
ASTMs E1886/E1996	1/4" tempered	IPA	Missile Level "A"	
Blast Mitigation			**Blast Load**	**Rating**
GSA TS01-2003 / ASTM F1642	1/4" tempered	IPA	6 psi, 42 psi-msec	GSA Level 2 / ASTM "No Hazard"
	1" double pane (annealed)	IPA	6 psi, 42 psi-msec	GSA Level 2 / ASTM "No Hazard"
	1" double pane (tempered)	IPA	9 psi, 80 psi-msec	GSA Level 2 / ASTM "No Hazard"

* Based on dry lamination of film to single pane glass and wet lamination of film to double pane insulated glass units.

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

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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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