

# Get tear-resistance with enhanced views, especially at night with 3M<sup>™</sup> Scotchshield<sup>™</sup> Safety & Security Window Film Ultra Night Vision Series.

- Combines the safety and security benefits of 3M<sup>™</sup> Scotchshield<sup>™</sup> Safety & Security Window Film Ultra Series with the sun control benefits of 3M<sup>™</sup> Sun Control Night Vision Series
- Product must be installed with the 3M<sup>™</sup> 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 (product is <u>not</u> bulletproof and is <u>not</u> designed to stop intruders)
- 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
- ► Comprehensive warranty by 3M

|                             | <b>S25</b> |
|-----------------------------|------------|
| Break and Entry             | ****       |
| Safety Glazing              | ****       |
| Seismic                     | ****       |
| Blast Mitigation            | ****       |
| Energy Savings              | ***        |
| Heat Rejection              | ***        |
| Glare Reduction             | ***        |
| Interior Visible Reflection | ****       |

Best ★★★★
Better ★★★
Good ★★★

Ratings in comparison to other 3M<sup>™</sup> Safety & Security Window Films.













### **Break and Entry**

 Can help delay intruders and help provide extra response time by slowing the intruder down

#### **Performance Testing**

3M proprietary tests



## **Safety Glazing**

- Can be used in certain instances to help upgrade facilities to building codes
- Help prevent flying shards of glass from harming building occupants or damaging property

#### **Performance Testing**

► ANSI Z97.1

► EN 12600



## **Blast Mitigation**

 Helps protect people from the risk of flying glass shards, one of the most common causes of blast-related injuries and fatalities

#### **Performance Testing**

- ► ASTM F1642
- ► GSA TS01-2003

## Solar Properties — not for specification purposes

| Glass Type<br>(All 1/4") | Film Type    | Reflected<br>(Interior) | Visible Light Reflected (Exterior) | Transmitted | Total<br>Solar Energy<br>Rejected | Solar<br>Heat Gain<br>Coefficient<br>(G Value) | U V<br>btu/<br>hft²F | alue<br>w/<br>m²K | Solar Heat<br>Reduction | UV Light<br>Rejected | Glare<br>Reduction | Visible Light<br>to Solar Heat<br>Gain Ratio |
|--------------------------|--------------|-------------------------|------------------------------------|-------------|-----------------------------------|--|----------------------|-------------------|-------------------------|----------------------|--------------------|--|
| <u>)</u><br>Clear        | Ultra NV S25 | 9%                      | 24%                                | 24%         | 63%                               | 0.37   | 1.01                 | 5.7               | 54%                     | 99.9%                | 73%                | 0.6  |
| Tinted                   | Ultra NV S25 | 9%                      | 12%                                | 14%         | 64%                               | 0.36   | 1.01                 | 5.7               | 43%                     | 99.9%                | 73%                | 0.4  |
| Double Clear             | Ultra NV S25 | 10%                     | 28%                                | 22%         | 53%                               | 0.47   | 0.47                 | 2.7               | 33%                     | 99.9%                | 73%                | 0.5  |
| Double Tinted            | Ultra NV S25 | 10%                     | 13%                                | 13%         | 64%                               | 0.36   | 0.47                 | 2.7               | 29%                     | 99.9%                | 73%                | 0.4  |

# Film Properties (nominal) — not for specification purposes

| Film Type                 | Film<br>Thickness | Construction  | Tear Resistance | Tensile Strength        | Break<br>Strength          | Elongation<br>at Break | Peel<br>Strength         | Abrasion<br>Resistance |
|---------------------------|-------------------|---------------|-----------------|-------------------------|----------------------------|------------------------|--------------------------|------------------------|
| Ultra Night<br>Vision S25 | 8 mil<br>(0.22mm) | Micro-layered | 1,100 lbs%      | 27,000 psi<br>(186 MPa) | 215 lbs/in<br>(956 N/25mm) | 140%                   | >4 lbs/in<br>(18 N/25mm) | 3% Δ Haze              |

IMPORTANT: This is an overview of product features. References to explosions or blasts apply only to commercial and non-educational government facility applications. Prior to product selection, always refer to the current 3M Technical Data Sheet for detailed product information.

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<sup>™</sup> 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<sup>™</sup> 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, Limited Remedy, and Disclaimer: Please refer to the Warranty Bulletin for 3M<sup>™</sup> Window Films (Flat Glass Applications) and 3M<sup>™</sup> 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. If a 3M product does not conform to the warranties described in this Warranty Bulletin, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price. Except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

