

# 3M™ Scotchshield™ Safety & Security Window Film

## Ultra S600

### Technical Data

#### Product Features & Benefits

- Micro-layered film designed for tear resistance
- Optically clear
- Applies to interior glass surfaces
- Helps protect from broken glass hazards
- Helps extend the life of furnishings by significantly reducing harmful UV rays

#### Applications

- Bomb Blast Mitigation
- Safety Glazing
- Helping to Deter Break & Entry
- Building Envelope Protection
- Spontaneous Glass Breakage
- Seismic Preparedness

#### Performance Testing\*

Method	Glass Substrate	Film Attachment	Rating	
<b>Safety Glazing</b>				
16 CFR 1201	¼" & 1/8" annealed	--	Category 2, 400 ft-lbs	
ANSI Z97.1			Class A (Unlimited), 400 ft-lbs	
<b>Impact Resistance</b>				
ASTMs E1886 / E1996	3/16" tempered	IPA	Missile Level A, +/- 80 psf	
ASTM E330			+/- 100 psf	
<b>Blast Mitigation</b>			<b>Blast Load</b>	<b>Rating</b>
GSA TS01-2003 / ASTM F1642	¼" annealed	IPA	6 psi, 42 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"
		IPP	6 psi, 42 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"
	¼" tempered	IPA	6 psi, 42 psi*msec	GSA Level 2 / ASTM "No Hazard"
		IPP	6 psi, 42 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"
	1" double pane (annealed)	IPA	9 psi, 60 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"
		IPP	8 psi, 60 psi*msec	GSA Level 2 / ASTM "Minimal Hazard"

\* Glazing systems vary. Contact 3M for more information.

#### Film Properties (nominal)

Film Thickness	6 mils
Film Construction	Micro-layered
<b>Tensile Properties (ASTM D882)</b>	
Tensile Strength	32,000 psi
Break Strength	210 lbs/in
Elongation at Break	115%
Yield Strength	15,000 psi
Elongation at Yield	9%
Modulus	443 kpsi

Graves Area Tear Resistance (ASTM D1004)	1,000 lbs%
Puncture-Propagation-Tear Resistance (ASTM D2582)	6 lbf
Puncture Strength (ASTM D4830)	140 lbf
Abrasion Resistance (ASTM D1044)	3% Δ haze
Peel Strength (ASTM D3330)	8 lb/in
Flammability (ASTM E84)	Class A
<b>Solar Properties – film applied to ¼" clear glass</b>	
Visible Light Transmitted	87%
UV Light Rejected	99.9%

#### IMPORTANT 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.

The information provided in this report is believed to be reliable; however, due to the wide variety of intervening factors, 3M does not warrant that the results will necessarily be obtained. All details concerning product specifications and terms of sale are available from 3M.



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