

**Product Description**

3M™ Scotchshield™ Safety and Security Window Film Ultra S800 is a multi-layered, optically clear, tear-resistant safety window film.

**Applications**

3M™ Scotchshield™ Ultra S800 is intended for interior application on flat glass substrates.

**Physical Properties**

The values displayed are the results of illustrative lab test measurements made according to the indicated external norm and shall not be considered as a commitment from 3M.

<b>Characteristics</b>	<b>Value</b>
Film Thickness	200 µm (8 mils)
Total Film Thickness (Film + Adhesive)	229 µm (9 mils)
Film Construction	Micro-layered
Tensile Strength MD/TD (ASTM D882)	227 MPa (33,000 psi) 207 MPa (30,000 psi)
Break Strength MD/TD (ASTM D882)	46 N/mm (265 lbs/in) MD 42 N/mm (240 lbs/in) TD
Elongation at Break MD/TD (ASTM D882)	140% MD 130% TD
Yield Strength (ASTM D882)	103 MPa (15,000 psi)
Energy (Joule) to Tear MD/TD (ASTM 1004) (Graves Tear)	1.23 J +/- 0.14 (1,001 lbs%) MD 1.19 J +/- 0.15 (1,050 lbs%) TD
Abrasion Resistance (ASTM D1044)	< 5% delta haze
<b>Flammability</b>	
Flammability EN 45545-2	HL1/HL2/HL3
Flammability EN 13501	B-s1, d0
Flammability (ASTM E84)	Class A
<b>Solar Properties – film applied to 6 mm clear glass EN 410</b>	
Visible Light Transmitted	87%
UV Light Rejected	99%

### Performance Testing

Method	Glass Substrate	Film Attachment*	Blast Load	GSA Performance Condition and/or ASTM Hazard rating
<b>Blast Mitigation</b>				
GSA TS01-2003 ASTM F1642	6 mm (1/4") annealed	IPA	6 psi, 42 psi msec	GSA Rating of "2" ASTM F1642 "No Hazard"
GSA TS01-2003 ASTM F1642	25 mm (1") double pane annealed	IPA	6 psi, 42 psi msec	GSA Rating of "2" ASTM F1642 "No Hazard"
GSA TS01-2003 ASTM F1642	25 mm (1") double pane annealed	IPA	9 psi, 60 psi msec	GSA Rating of "2" ASTM F1642 "No Hazard"
GSA TS01-2003 ASTM F1642	6 mm (1/4") tempered	IPA	6 psi, 42 psi msec	GSA Rating of "2" ASTM F1642 "No Hazard"
GSA TS01-2003 ASTM F1642	25 mm (1") double pane tempered	IPA	9 psi, 60 psi msec	GSA Rating of "2" ASTM F1642 "No Hazard"
GSA TS01-2003 ASTM F1642	25 mm (1") double pane tempered	IPA (2 sides)	6 psi, 42 psi msec	GSA Rating of "3a" ASTM F1642 "Minimal Hazard"
GSA TS01-2003	6 mm (1/4") tempered	IPA (2 sides)	6 psi, 42 psi msec	GSA Rating of "3a"
GSA TS01-2003	25 mm (1") double pane tempered	IPA	7.8 psi, 55 psi msec	GSA Rating of "2"
GSA TS01-2003	6 mm (1/4") annealed	IPA	9.4 psi, 55 psi msec	GSA Rating of "3b"

Method	Glass Substrate	Film Attachment*	Rating
<b>Safety Glazing</b>			
16 CFR 1201	6 mm (1/4") and 3 mm (1/8") annealed	N/A	Category 2, 400 ft-lbs
ANSI Z97.1			Class A (Unlimited), 400 ft-lbs
EN 12600	4 mm/6 mm	N/A	1B1/1B1
<b>Impact Resistance</b>			
ASTMs E1886/E1996	6 mm (1/4") tempered	IPA	Missile Level C +/- 75 psf
EN 356	4 mm/6 mm annealed	N/A	P1A/P1A
EN 356	5 mm tempered	N/A	P2A

\* IPA = 3M™ Impact Protection Attachment Sealant, all 4 sides unless noted. N/A = Not Applicable.

### Shelf Life and Storage (prior to application)

Shelf life is 5 years from the manufacturing date. Material should be stored in its original packaging, laying in a horizontal orientation, away from direct sunlight. Heavy objects should not be placed on top of it to avoid damaging the product. Recommended storage conditions are +21°C and 40 – 50% relative humidity. Avoid extreme temperature ranges in storage.

The shelf life as defined above remains an indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as warranty.

## Application

These are indicative values for 3M™ Window Film products.

Recommended substrate	Glass (as described in EN 15755-1)
Recommended surface	Flat to simple curved
Application method	Suitable for wet application or dry, semi-automatic lamination
Application temperature	From +4°C to + 45°C
Service temperature	From - 40°C to + 80°C
Edge sealing	Not necessary
Edge retention	IPA or similar is recommended for glass mitigation applications
Drying Time	Final adhesion is dependent on film thickness and prevailing drying conditions. Typical cure times for films > 100 µm < 200 µm = 60 days. Please refer to local instructions for details.

## Maintenance and Cleaning

Use a cleaning agent designed for high quality glass surfaces. The cleaning agent must be wet and non-abrasive with a pH value between 6 and 8 (neither strongly acidic nor strongly alkaline).

## Health and Safety

When handling any chemical products, read the manufacturer's container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information.

Follow the link to obtain SDS sheets for 3M products on [3M.com/SDS](http://3M.com/SDS).

IMPORTANT! When using any equipment, always follow the manufacturer's instructions for safe operation.

## Warranty

3M warrants that each 3M product will be free from defects in material and manufacture for the length of the product warranty. 3M MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

## Remarks

### Important notice

This bulletin provides technical information only.

All questions of warranty and liability relating to this product are governed by the terms and conditions of the sale, subject, where applicable, to the prevailing law.

Before using, the user must determine the suitability of the product for its required or intended use, and the user assumes all risk and liability whatsoever in connection therewith.

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