

Renewable Energy Division  
3M™ Scotchshield™ Safety and Security Window Film Ultra Series



Be on the  
safe side



## 3M™ Scotchshield™ Safety and Security Window Film Ultra Series

- Impact protection against flying or broken glass
- Multilayer bomb blast mitigation technology
- Increased peace of mind with market leading tear resistance
- Superior protection against forced entry and civil unrest
- Clear films that blocks up to 99.9% of UV to reduce fading



# Ultra Series

## Description

**3M™ Scotchshield™ Ultra S600 and Ultra S800** are designed for use on the interior surface of windows. They are composed of alternating stacks of transparent and weather stable polyester film, scratch resistant surface and a strong acrylic adhesive. The high tensile strength and elongation at break properties, plus market leading tear strength (Graves tear), significantly increase resistance of the glazing system to impact. A superior adhesive also results in market leading fragment retention. Additionally the films also significantly reduce the transmission of UVA and UVB rays, which are the main cause of fading.

3M's **Ultra Series** provide an effective protection from injuries to persons or damage to items caused by fragments of broken glass. In the case of glass breakage, the fragments are held together by strong acrylic adhesives. This technology can mitigate bomb blasts as well as provide superior protection against forced entry, civil unrest and other impacts.

**Scotchshield™ Ultra S600 and Ultra S800** are certified impact resistant according to EN 12600. Both films are also rated Class A fire resistant, according to ASTM E84.

## Features (on 6 mm clear glass)

Visible Light Transmission 87-88%  
 UV rays blocked according to EN410 99.9%

## Film properties

Colour Clear  
 Material Multilayer polyester  
 Adhesive Pressure sensitive acrylic  
 Top coating Scratch resistant hard coat

## Installation

3M Window films are installed using water and a soap solution. Full adhesion is reached after approximately 20 days at 18°C (in dry conditions).

## Cleaning

3M Window films may be cleaned 30 days after installation using ordinary window cleaning agents and avoiding the use of abrasive particles. Do not use rough sponges, cloths or brushes. Synthetic sponges, soft wipes or rubber squeegee cleaners are recommended.

| Film Type                | Film Direction | Film Thickness | Visible Light Transmitted (on clear 6mm glass) according to EN410 | Tensile Strength and Elongation according to ISO EN 527-3/2/50 |                        | Tear Resistance according to DIN ISO 34-1 Method B (a) | Peel Adhesion on glass according to EN 28510-2 | Abrasion Resistance according to EN15752-1 |
|--------------------------|----------------|----------------|---|--|------------------------|--|--|--|
|                          |                |                |   | Tensile @ Break (MPa)  | Elongation @ Break (%) |  |  |  |
| Scotchshield™ Ultra S600 | Machine        | 150            | 88  | 350  | 110                    | 900  | >30  | <5   |
|                          | Transverse     |                |   | 350  | 95                     |  |  |  |
| Scotchshield™ Ultra S800 | Machine        | 200            | 87  | 430  | 110                    | 1000   | >30  | <5   |
|                          | Transverse     |                |   | 430  | 95                     |  |  |  |

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations

