

Protection against the hazards of spontaneous glass breakage.

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— Al Hardt, Alan and Associates

3M™ Scotchshield™ Safety & Security Window Film Ultra Series

Luxury Hotel — Chicago, Illinois

► Project Scope

A luxury hotel in downtown Chicago, IL, suffered several instances where glass shower doors in the hotel rooms spontaneously exploded due to microscopic defects in the tempered glass, known as nickel sulfide (NiS) inclusions. The imminent hazards to hotel guests required an immediate solution ensuring that all of the hotel glass shower doors be reinforced in the event of further spontaneous glass breakage.



► Situation

Hotel management realized they needed to act quickly to address the spontaneous glass breakage. While safety was their top concern, they also needed to preserve the luxury aesthetic and experience that customers associate with their hotel brand. They researched potential solutions and considered replacing all the tempered glass with laminated glass, but this was an expensive proposition. Finally, after working with a local building and architectural consulting firm, they were introduced to safety and security film as a cost-effective alternative.

► Solution

Alan and Associates, a local 3M Authorized Window Film Dealer, was brought in to provide a product recommendation and to demonstrate its effectiveness for glass fragment retention. They recommended 3M™ Scotchshield™ Safety & Security Window Film Ultra S400, an optically clear 4-mil thick safety film with tear resistant properties. The situation was particularly challenging because the shower glass had very little supporting connections holding the glass in place. A demonstration was necessary to ensure the film would contain the glass fragments while remaining secured to the shower door anchor clips.

To prove out the proposed solution, Alan and Associates applied Ultra S400 safety window film to one of the shower doors by removing the glass panel, filming one side of the glass leaving 1/16" of an exposed edge along all four sides, and then trimming circles through the film at the locations where the anchor clips were positioned. The anchor clips overlapped the applied film by only 1/16 to 1/8 of an inch.

► Result

Improved protection, aesthetics and efficiency.

After applying the film and putting the shower door back in place, the glass was broken with a center punch (simulating spontaneous glass breakage). The film successfully held all the glass fragments in place – even after several attempts to manually dislodge the filmed glass panel from the supporting anchor clips. Even after 72 hours, the broken glass shower door remained in place with no glass fragments separating from the film or visible on the bathroom floor.

“The tear resistance of the 3M Scotchshield Safety & Security Window Film Ultra S400 made it easily possible to trim circular patterns through the middle of the film without creating a weak point in these areas,” says Al Hardt of Alan and Associates.

“I’m not sure we would have had the same results with other conventional films. This demonstration gave hotel management the confidence they needed to move forward. Before we had even left the building we heard that they had placed the order to have the rest of the hotel shower doors secured with the 3M film!”

Case Study Summary

Challenge: Protect guests from spontaneous glass breakage while maintaining a luxury feel.

Product Selection: 3M™ Scotchshield™ Safety & Security Window Film Ultra S400

Benefits: Can hold glass fragments in place for an extended period of time. Tear resistance can allow for trimming of the film.

