

Window Film Attachment Systems

The choice of safety and security window film systems is always driven by required designed performance, or specification. For example, an unprotected window under a relatively small pressure scenario can still shatter, allowing shards of glass to fly through the room potentially causing significant injury. However, a very thin 4-mil (0.004" thick) film can be installed inexpensively (see "Daylight" attachment below) on a window to protect occupants during this event (typically 4 psi / 28 psi•ms).

However, as the blast pressure increases, eventually it can be high enough to force the entire filmed window to become detached from the frame and fly through the room. For this reason, window film attachment systems were designed to bond the filmed window to the window frame even under higher blast loads. Using thicker film and a so-called "Wet Glazed" attachment system can protect to higher blast loads than Daylight attachment and incrementally thicker films combined with a "Mechanical" attachment system protect under even tougher conditions ... see below:

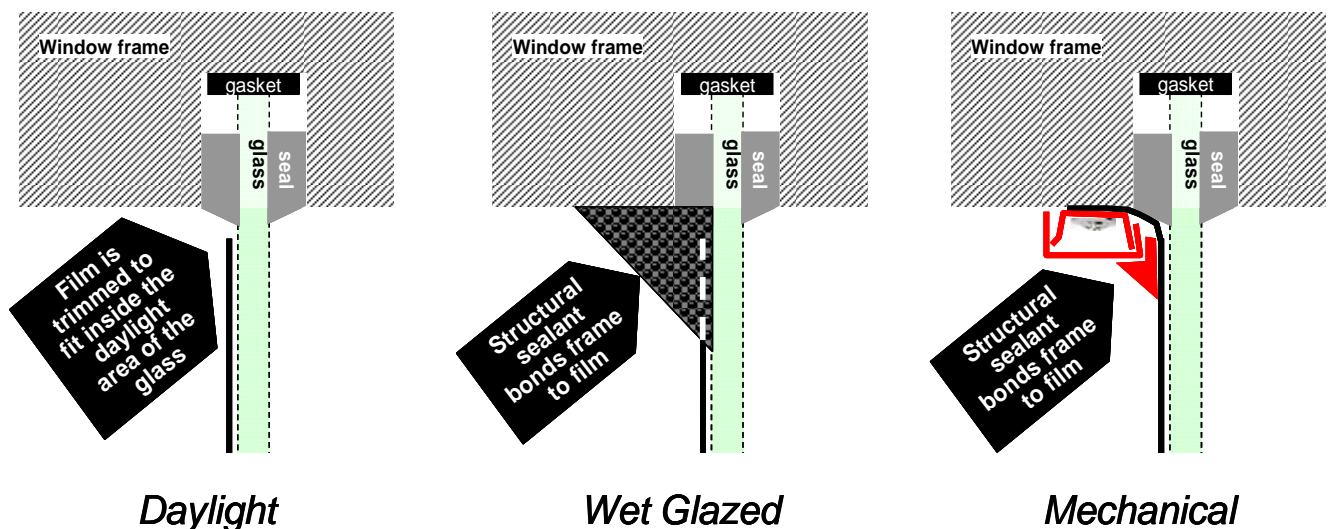


Figure 1 - Typical Window Film Attachment Systems

It is interesting to note, however, that because these attachment systems provide for a mechanical bond between the film and the frame, eventually the blast scenario could be high enough to cause the whole FRAME to fly through the room. For that reason, our engineers can match very high blast loads with proven cabled solutions where the filmed window is *allowed* to come out of the frame (daylight attachment) but is "caught" by the virtually undetectable cable system. This cable catch system can protect against very high blast loads at a much lower cost than structural changes often required by replacement windows rated for very high blast loads.