

BULLETIN

COASTAL HAZARDS

Consumer Tips: Selecting Storm Shutters

There are more and more companies in coastal areas that are in the business of selling and installing storm shutters. Just check your local yellow pages under the listings for “shutters” and “storm windows and doors”. Because these are relatively new products in the market place, consumers may not know how to evaluate these products and services in their comparison shopping. Following are just a few tips for the consumer on purchasing storm shutters.

1. Storm shutters offer two kinds of protection. They can be designed to protect against wind pressure, debris impacts, or both. It is important to know what kind of protection you are getting.
2. To minimize the potential for wind borne debris around your house, secure lawn and patio furniture, garbage cans, flower pots, etc.
3. If the shutter is designed to withstand debris impact, look for the Dade County, Florida standard. It is a very tough standard developed for the extreme wind conditions found in south Florida. It is also appropriate for use elsewhere along the southeast and gulf coasts on barrier islands, other highly exposed sites or in locations with a particularly high potential for air borne debris. Shutters designed to a lesser standard may be sufficient for locations without these high risk factors and be a more cost-effective alternative. Standards to look for include the SBCCI Test Standard for Determining Impact Resistance from Windborne Debris (SSTD 12-97) or the ASTM Standard Specification for Performance of Exterior Windows, Glazed Curtain Walls, Doors and Storm Shutters Impacted by Windborne Debris in Hurricanes (ASTM E 1996-00).
4. Shutters should be attached to the structural framing of the house and not the window or door frames. Window and door frames may themselves be inadequately attached to the structural framing to withstand extreme pressures caused by severe winds.
5. Make sure all exposed metal fittings (including screws, embedded anchors, etc.) are weather (corrosion) resistant.

6. For the do-it-yourselfers, design and installation guidelines for plywood storm shutters are available. These shutters provide some level of protection and are typically the least expensive option. However, they also require a significant amount of time to mount; and the process can be difficult and even dangerous. Plywood shutters are heavy, probably require at least two people to mount and for upper story windows require the use of a ladder. Even moderate winds exacerbate the danger of working with heavy plywood on a ladder. For these reasons, plywood storm shutters are best suited for lower story windows.

The APA - the Engineered Wood Association offers five plywood storm shutter design and installation options. Write them at: APA - The Engineered Wood Association, PO Box 11700, Tacoma, Washington 98411-0700. The designs are \$1 each or \$5 for the set. Phone: (206) 565-6600. FAX: (206) 565-7265. The designs can be downloaded for free at their Web site: <www.apawood.org>.

7. Homeowners with garages, especially attached garages, should also ask their shutter dealer about retrofitting their garage doors for high winds. If a garage door fails due to high winds, it can cause the interior of the house to become pressurized and increase the chances of losing all or part of the roof. Garage doors designed for high winds have reinforced door panels and tracks. Grab your garage door track. If it can be twisted at all by hand, it is not wind resistant. Garage door retrofit kits may be available at your local building supply store.

Important Notes:

1) While properly selected and installed storm shutters should add to the performance of a home in high winds, it is important to remember, however, that **NOTHING IS HURRICANE PROOF**. The state-of-the-art in storm winds protection for homes and businesses is advancing. On-going scientific and engineering research may yield improved design and installation recommendations in the future.

2) Every home is unique and there are no general recommendation which are universally applicable to all homes. It is a situation similar to that of the medical doctors on the network's morning television news programs who give general medical information, but refer viewers to their personal physicians for individual diagnoses. For specific advice about hazard retrofit recommendations for existing homes and small commercial structures, or hazard mitigation techniques for new construction, home and business owners are urged to contact a licensed, consulting engineer in their area.

3) This guide was developed by the SC Sea Grant Extension Program in consultation with faculty of the Clemson University Civil Engineering Department's Wind Load Test Facility. Send comments and general questions to: <baconrh@musc.edu>.

4) A good source of information on home retrofit for hurricanes, including shutters and other building elements is available through the Institute for Business and Home Safety at: phone ((617) 292-2003; fax (617) 292-2022; or <www.ibhs.org>. The publication is titled: Is Your Home Protected From Hurricane Disaster?: A Homeowner's Guide to Hurricane Retrofit.