

## Hurricane Impact Codes

Some localities, including Dade County, Florida, require that glass manufacturers indicate on the glass surface that glass products are manufactured with approved materials that have been shown to resist test specifications for impact and wind pressure cycling. For example, Dade County and some locales, which follow the SBCCI (Southern Building Code Congress International), require that the window must meet the following test conditions:

- The window must withstand the impact of a 9-pound 2x4 traveling at 34 mph, without penetration of the glass product
- The window is pressure cycled for a total of 9,000 +/- pressure cycles at the windload specified for that locale

(The above tests are referenced in ASTM Standard E 1886 "Test Method for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials".)

To indicate that the window product was manufactured with Dade County-approved materials, the following typical Dade County approval logo is permanently attached to the glass:

Cardinal LG  
D.C.A. LSG (Dade County approval Laminated Safety Glass)  
16 CFR 1201 C11  
ANZ1 Z97.1 1984  
SGCC 2167 U  
..090 98..

The glass unit and the sash are integral parts of a window assembly. Proper installation of the window assembly into a dwelling or other structure is equally integral to the ability of glass to meet a test like that of Dade County. Glass

units that are tested in conditions that simulate a properly manufactured sash and installation can be shown to resist impact and withstand pressure, conforming to such local requirements. However, such successful tests do not assure that a window assembly installed in a dwelling or other structure will not fail, where such failure is attributable to defects in the sash or the installation of the window assembly in the dwelling or other structure.

Placement of a logo on the glass only provides evidence that the glass unit was manufactured with Dade County approved materials. The logo does not indicate that the sash has been properly manufactured, or that the window assembly has been installed properly into the dwelling or other structure.

Furthermore, the logo does not indicate that the glass product that complies with the requirements of a locality, even if properly manufactured into a window assembly and properly installed into a structure, will withstand the variable forces of any hurricane.

Glass product designs with DuPont's SentryGlas® and SentryGlas® Plus, and laminated glass with 0.090 inch PVB interlayer have demonstrated their compliance with the material testing requirements imposed by Dade County, Florida. Accordingly, Cardinal has placed its logo on glass products made with these products to indicate that these "glass products" are manufactured with approved materials and procedures.

Cardinal has the following Dade County N.O.A. (notification of acceptance) number for our laminated glass products.

07-0831.06 SeaStorm®  
03-0415.13 Vanceva Composites®  
06-0216.06 Saflex® III G  
03-0827.08 Solutia® interlayers  
05-1208.02 Dupont® Butacite® PVB  
04-0818.01 Dupont® SentryGlas®  
08-1116.04 Dupont® SentryGlas® Plus

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