

# Marking and Labeling of Laminated Glass

The purpose of this bulletin is to provide guidance and clarity on the industry guidelines for marking and labeling (i.e., logos) that are applied and/or required for architectural laminated glass. Supporting information can be found in the NGA/GANA Glass Informational Bulletin, “Marking and Labeling of Architectural Laminated Glass,” and in the referenced standards and codes.

Note that by applying a logo on a product with a standard reference or designation, the party applying the logo is representing that product as being in compliance with the referenced standard. No manufacturer should mark, label or advertise any product for which proof of compliance is not available.

## U.S. Building Codes

The family of codes developed by the International Code Council (ICC) is the most widely enforced set of building codes in the United States. The members of this family commonly referred to as “the I-codes,” include two major codes that have general requirements for identification of glass and glazing materials—the International Residential Code (IRC) for low rise residential buildings and the International Building Code (IBC) for commercial buildings. The 2018 editions of the IRC and IBC are the most recent; however, multiple editions of these building codes are being enforced across the country so it is important for window and door manufacturers and commercial glazing contractors to understand what building code is being used for the project at hand.

Neither the IRC or IBC have special requirements for laminated glass, but both have the special requirement for the identification of safety glazing required in code-defined hazardous locations.

## Definitions

The following definitions are adapted from the International Building Code (IBC):

**Manufacturer’s Mark** – An identification applied on a glass product by the manufacturer indicating the name of the manufacturer and the type and thickness of the glazing

material.

**Manufacturer’s Designation** – An identification applied on a glass product by the manufacturer indicating that the product complies with a specific standard or set of rules.

**Label** – An identification applied on a glass product by the manufacturer that contains the name of the manufacturer, the type and thickness of the glazing material, and the name and identification of an approved agency and that indicates that the representative sample of the material has been tested and evaluated by an approved agency. Approved agencies are not defined in the IRC or IBC but are understood to be third-party certification agencies such as, but not limited to, the Safety Glazing Certification Council (SGCC) and the Insulating Glazing Certification Council (IGCC).

The term “logo” will be used herein as an umbrella term to encompass all of the aforementioned terms.

## Laminated Glass in Non-Safety Glazing Applications

For low-rise residential constructions, the IRC requires each pane of glazing installed in hazardous locations as defined in Section R308.4 be permanently identified with the manufacturer’s designation. In other words, residential laminated glass not specified to meet safety standards does not require any kind of permanent logos.

For commercial buildings, however, the IBC does require laminated glass not specified to meet safety standards to be permanently identified with the manufacturer’s mark. The identification shall not be omitted unless approved by a local building code official and an affidavit is furnished by the glazing contractor stating that the correct glazing was installed based upon the approved construction documents.

## Laminated Glass in Safety Glazing Applications

For laminated safety glass (i.e. laminated glass specified to meet safety standards) installed in residential buildings, the IRC requires each pane to be permanently identified with the manufacturer’s designation specifying who applied the designation, the type of glass and the safety glazing standard (“CPSC 16 CFR 1201” or “ANSI Z97.1-2015” as appropriate) with which it complies and that is visible in the final installation. A label shall be permitted in lieu of the manufacturer’s designation.

For laminated safety glass installed in commercial

buildings, the IBC requires each pane to be permanently identified with the manufacturer’s designation specifying who applied the designation, the manufacturer or installer and the safety glazing standard (“CPSC 16 CFR 1201” or “ANSI Z97.1-2015” as appropriate) with which it complies, as well as the type and thickness of the glass or glazing material. A label meeting all the same requirements shall be permitted in lieu of the manufacturer’s designation.

**Certification of Safety Glazing Materials**

Cardinal LG chooses to participate in the Safety Glazing Certification Council (SGCC) as a third-party certification program to test its heat-treated and laminated glass products to the safety glazing requirements listed in CPSC 16 CFR 1201 and ANSI Z97.1-2015. We also self-certify safety glazing products by relying upon in-house testing in accordance with ANSI and CPSC standards.

A typical logo identifying Cardinal LG’s laminated glass as a safety glazing product is shown below:

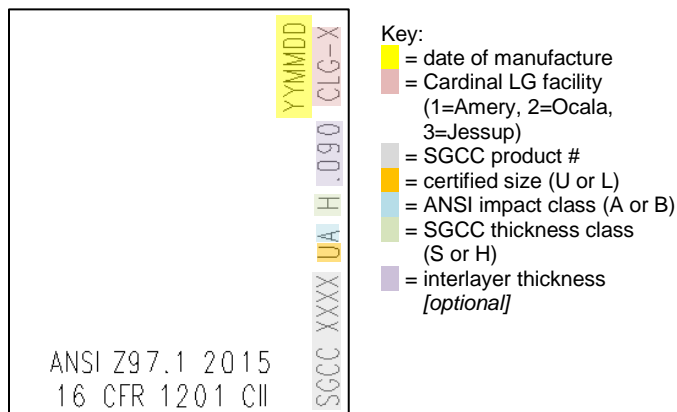


Figure 1. A typical Cardinal LG logo for safety glazing products.

**Laminated Glass Used in Hurricane Applications**

Since Hurricane Andrew, it is now realized windows are a key point of entry for wind, rain and wind-borne debris. Coastal states, particularly Florida, reacted by implementing strict building codes that call for hurricane-resistant systems, otherwise known as impact-resistant systems. In the state of Florida, any fenestration system on the exterior of a structure must have either a Florida Product Approval or Miami-Dade Notice of Acceptance (NOA). Florida has the most stringent building codes when it comes to impact resistance, thus creating the industry standard. If a fenestration system receives Florida Product Approval, it will generally be accepted to meet regional requirements in other states.

The Florida Building Code requires each pane to be permanently identified with the manufacturer’s designation specifying who applied the designation, the manufacturer or installer and the safety glazing standard (“CPSC 16 CFR 1201” or “ANSI Z97.1-2015” as appropriate) with which it complies, as well as the type and thickness of the glass or glazing material. A label meeting all the same requirements shall be permitted in lieu of the manufacturer’s designation. The details of this permanent marking are included in each component NOA. These marks usually include the letters “MDCA” for “Miami-Dade County Approved” followed by an abbreviation or trade-name of the laminated glazing interlayer as well as the nominal interlayer thickness.

An example of a Cardinal LG logo for laminated glass used in hurricane applications is shown below:

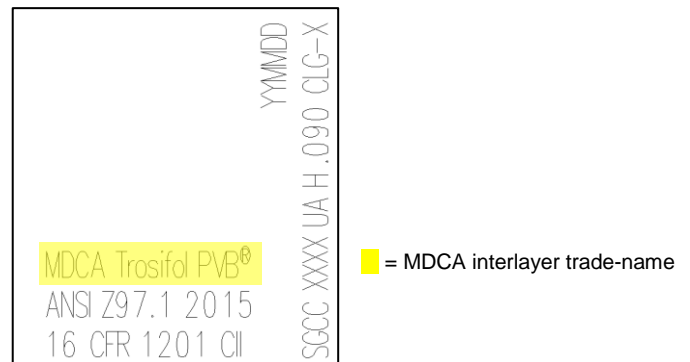


Figure 2. Example of a Cardinal LG logo for laminated glass used in hurricane applications.

**Laminated Glass Used in Security Applications**

Security glazing generally falls into three broad categories: burglary/forced entry, ballistics, and bomb blast. Because of the nature of these glazing applications, there is a desire for anonymity of materials and their performance characteristics. As such, test reports are what is typically provided to communicate performance levels and compliance to particular standards.

Currently, the only industry standards for security applications that have marking requirements are the Underwriter Laboratory standards—UL 972, for burglary resisting glazing material, and UL 752, for bullet resisting equipment.

Per UL 972, Section 7, the finished glazing must be marked with the manufacturer’s or private labeler’s identification or distinctive catalog number. The marking may be applied to the protective film or the package the

glazing material is shipped in from the factory. If the manufacturer produces the laminate at more than one factory, the manufacturer must have a distinctive marking to identify the location of fabrication.

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Per UL 752, Section 57, the finished glazing must have a permanent logo that is visible after installation. The logo must include the manufacturer’s or private labeler’s name or identifying symbol, the date of manufacture, a model number, the correct mounting position (e.g. surface orientation for asymmetrical laminates), and the bullet-resistant rating. If a company manufactures the product at more than one factory, each product must have a distinctive marking to identify the location of fabrication.

**Re-labeling After Cutting Stock Sheets**

Special consideration is required for laminated glass that is provided in stock sheets and cut to the finished size. If a section cut from a stock sheet does not contain the laminator’s logo, the glass may have to be re-labeled prior to installation to comply with building codes. In this case, the recommended practice is to obtain written permission from the laminator to re-label the glass with the designation “C/F” for “Cut From.” This written permission should address such issues as logo accountability and application, differentiation between multi-source suppliers and a time frame or scope of labeling.

An example is shown below:

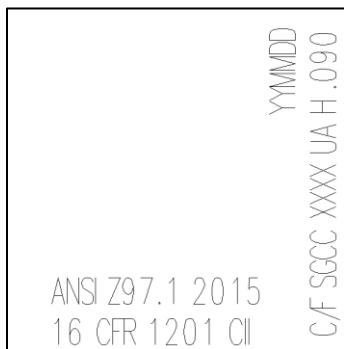


Figure 3. Example of an authorized logo for laminated glass cut from a stock sheet.

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