

# Glazing System Compatibility with Laminated Glass

It is important to verify compatibility of the glazing materials used in contact with the laminate interlayer whether it be a wet-glazed or dry-glazed system. Migratory solvents, acids, alcohol solutions, oils, and plasticizers present in some caulks, grouts, blocks, and sealants can chemically react with the organic components of the laminated glass. This in turn can cause the following edge defects to occur:

- Edge bubbles
- Edge discoloration
- Delamination of interlayer from glass or sealant from glass edge.

## Wet Glazing

Wet glazing is the application of an elastomeric sealant, usually silicone, between the glass assembly and sash or frame to form a weather-tight seal. It is a common, historically proven solution to bond the laminated glass to the supporting structure for impact resistant applications. When done properly, there is sufficient bond area between the laminated glass assembly and the sash or frame to prevent the glass from pulling out during either impact and/or cycle testing. Requisite coverage of the laminated glass assembly includes direct contact of the polymeric interlayer with the glazing material. Migratory components present within some glazing materials can then result in the aforementioned edge defects as well as negative effects on IG performance if the glazing materials are also incompatible with the insulating glass sealants (see Technical Service Bulletin #IG15).

## Railings

Most glass railing building codes, both in the US (2015 IBC Chapter 24) and Canada (CSA A500-16), have been changed from using monolithic tempered glass to now requiring laminated glass.

Prior to these code changes, it was a common practice to use Portland or gypsum-based cements as the grout for installing monolithic tempered glass. These cement-based grouts are NOT compatible with laminated glass and their use can lead to glass fracture and/or delamination. Other sealants/grouts should be evaluated for risk of incompatibility prior to use. Another way to avoid sealant incompatibility is to install a dry-glazed system. Dry-glazed systems typically incorporate a base shoe and the laminated glass panel is held in place through a sealant-free locking system.



Figure 1. Example of edge defects in laminated glass railings installed in cement-based grout.

## Evaluation of Glazing Materials

The window and door manufacturer or commercial glazer is ultimately responsible for ensuring compatibility between glazing materials and the laminated glass.

Cardinal LG supports its customers by offering as a service a limited evaluation of these glazing materials. These evaluations are done on a case-by-case basis and should not be applied across product lines, designs, or material types. Contact your Cardinal LG sales representative for assistance in the evaluation of glazing materials.

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