



The purpose of this memo is to state that all glass used in manufacturing of PBI doors are in fact either tempered or safety laminated, even if the tempering or lamination identification may not be visible.

Laminated Glass Specifications

Laminated glass is a type of multi-ply glass consisting of an assembly of two or more lites of glass bonded with a polyvinyl butyral (PVB) interlayer under heat and pressure. The result makes laminated architectural glass an excellent choice for safety glazing. Laminated glass is designed to crack upon impact but holds together when shattered.

Safety Glazing Codes

The glazing requirements for laminated glass used as safety glazing is defined by the Consumer Product Safety Commission (CPSC) 16 CFR 1201, American National Standard ANSI Z97.1-2015 and EN 1449 & EN12543.

The specifications for .015 PVB Category I laminated safety glazing is based on 9 sqft or less, except patio doors, shower and tub enclosures. The glass must break safely with a 150 lb impact.

The specifications for .030 PVB Cat II laminated safety glazing is based on 9 sqft or more, and includes patio doors, and shower and tub enclosures of any size. The glass must break safely with a 400 lb impact.

Sound Transmission Classification

Laminated glass is often used to reduce a building's interior partition noise level. Sound transmission classification (STC) value for glass under 'ideal test conditions' is a way of categorizing indoor acoustic noise levels.

- 1/8" (3mm) monolithic glass has an STC rating of 30
- 1/4" (6mm) monolithic glass has an STC rating of 31
- 1/8" x .030 x 1/8" laminated has an STC rating of 34
- 1" insulated glass 1/4" x 1/2" AS x 1/4" has an STC rating of 35

Structural Performance

The strength of laminated glass is determined by the glass thickness, type of vinyl, glass size, and the nature of loading. The United States Model Building Codes, the US International Building Codes, and ASTM E-1300 recognize laminated glass as having a monolithic annealed strength factor of .75, 2.0 for monolithic heat strengthened laminated glass lites, and 4.0 for monolithic tempered laminated glass lites when compared to monolithic annealed glass of the same thickness. Edge blemishes can reduce glass strength because they act as stress multipliers.

Solar Energy Control

Laminated glass reduces glare and effectively screens 99% of the UV radiation, providing protection against interior fading and deterioration of fabrics and finishes.