

## Architectural Glass Lamination

Laminating architectural glass provides an effective, robust way to increase glass thickness and strength, and incorporate custom elements such as colour and tint. From structural windows, to stairways, to bridges, and art exhibits, laminated architectural glass finds its way into every aspect of our daily lives





## Specification

Thickness

## Metric Measurement

6mm to 80mm

## Imperial Measurement

1/4" x 3 5/32"

Minimum Dimension

100mm x 100mm

4" x 4"

Maximum Dimension

6096mm x 3300mm

240" x 130"

Maximum Weight

2500Kg

2100Lbs

### Safety

All interlayers provide an exceptional level of safety. Annealed glass, for instance, will break in large, sharp shards. However, lamination will hold these pieces together and provide enough support until a replacement lite can be installed. A prime example is your car windshield. Do you ever wonder why it doesn't shatter when broken? That's because of the high strength PVB interlayer holding it together.

In North America, ANSI Z97.1 is the standard describing the safety of laminates. As a rule of thumb, it takes at least 0.030" (0.76) mm of PVB to meet the Z97.1 standard, which AGNORA follows

### Security

By combining layers of glass and interlayers, different levels of security can be achieved. Starting with resistance to a baseball bat hit to stopping Kalashnikov bullets. See our past article on storefront security.

### UV protection

A benefit of lamination is its ability to filter out harmful UV that can impact and fade surrounding furniture and objects. In fact, PVB or SentryGlas interlayers can reduce more than 98% of UV rays.

### Solar protection

By embedding a solar control high-performance coating, you can obtain an excellent solar heat gain coefficient (SHGC). For example, a 3/8" / 0.030" / PVB 3/8" – 1010.2 laminate can offer visible light transmission of 67% and a SHGC of 36%

### Structural application

The advent of stiff interlayers like SentryGlas and DG-41 provide structural support for use in stairways, bridges, railings, and fins among other custom requirements. With a shear modulus that can be two orders of magnitude (100x) stiffer than traditional PVB, SentryGlas is an effective structural component.

### A substitute for thick, expensive monolithic glass

As glass increases in size, so does its thickness required to meet wind load conditions. Thick float glass (>1/2"-12 mm) costs more than its laminated equivalent. For example, a 3/4" – 19 mm Fully Tempered (FT) lite will cost 55% more than its annealed, laminated counterpart (3/8" / 0.030" / PVB 3/8" – 1010.2). Using this combination is a clearly desirable solution as it also eliminates spontaneous breakage risks, optical distortions, and anisotropy.

### The BIGgest Equipment, The Highest Quality

AGNORA is known for a lot of things. Things such as custom, high-quality glass, and precision workmanship. We're also known for BIG glass, and as such our lamination line is the largest in North America, capable of handling glass 130" x 300" (3.3 x 7.6m) and thicknesses from 1/4" to 4" (6mm to 100mm) (max weight per piece: 5500 Lb – 2500 kg).

This fully automated line cleans and prepares each glass lite within a temperature-controlled clean room. Operators are responsible for the final alignment and application of interlayers. From there, the freshly laminated glass "sandwich" is sent through an advanced nip process which heats and squeezes the laminate to expel trapped air.

Finally, AGNORA's massive autoclave is used to fully heat and pressurize the glass in order to alleviate any remaining air, firmly cementing the interlayer to the glass substrate through 190 PSI (13 bar) of pressure and 275 °F (135 °C).

### What's In Stock

PVB

SentryGlas

Vanceva Colour

DG41

