



PVB, EVA, OR SENTRYGLAS®? CHOOSING THE RIGHT INTERLAYER FOR THE APPLICATION: PART 2 IN OUR 3-PART TRENDS SERIES

Introduction

Laminated glass continues to play an increasingly important role in commercial glazing because it can address a wide range of performance requirements, including safety, structural performance, hurricane impact, security, acoustics, and design flexibility. However, not all laminated glass performs the same way, and one of the most important factors affecting performance is the interlayer selected for the application.

Choosing an interlayer should not simply mean selecting the strongest or most expensive product. The correct choice depends on the requirements of the complete glazing system, including the application, glass makeup, size, support conditions, design loads, framing, applicable codes, and required post-breakage performance. At Precision Glass Industries (PGI), we work with multiple interlayer technologies and use our experience to help customers, architects, and engineers evaluate the appropriate laminated glass configuration for each project.



Polyvinyl Butyral (PVB): The Workhorse Of Laminated Glass

For decades, polyvinyl butyral (PVB) has been the standard interlayer for architectural laminated safety glass. Conventional PVB provides strong adhesion to glass and helps retain glass fragments after breakage, making it well suited for a broad range of safety glazing applications, including doors, sidelites, windows, partitions, interior glazing, and other areas requiring laminated safety glass.

PVB also provides significant design and performance flexibility. Depending on the selected product and glass configuration, laminated glass can incorporate acoustic performance, color, decorative options, UV control, security performance, and other characteristics while maintaining the fundamental benefits of laminated safety glass. For many common architectural applications, conventional PVB is not simply the basic option; it is the appropriate solution.

Ethylene-Vinyl Acetate (EVA): A Specialized Alternative

EVA is another interlayer option used in certain laminated glass applications, particularly where characteristics such as moisture resistance, exposed-edge conditions, or specific decorative requirements may be beneficial. It is available in clear, colored, translucent, and decorative options, but its suitability should be evaluated based on the requirements of the complete glazing system.





When SentryGlas® Enters The Picture

SentryGlas® is Kuraray's high-performance ionoplast interlayer, originally developed for demanding hurricane glazing applications and now widely used in structural and other high-performance laminated glass systems. According to Kuraray, SentryGlas® is five times stronger and up to 100 times stiffer than conventional PVB, providing significantly greater rigidity where the laminated glass is expected to contribute to the structural performance of the glazing assembly.

One of the most important advantages of SentryGlas® is its post-breakage performance. In applications such as railings, canopies, overhead glazing, structural glass, and certain hurricane or security systems, what happens after the glass breaks can be just as important as the initial resistance to breakage. The greater stiffness of SentryGlas® can help a properly designed laminated assembly retain greater structural integrity after breakage.

SentryGlas® is also recognized for its optical clarity. Based on PGI's experience processing and evaluating different ionoplast products, clarity and visual consistency can vary between products. This becomes increasingly important in larger architectural lites, exposed-edge applications, and other installations where optical quality is highly visible.

Applications can include:

- Glass railings and balustrades
- Canopies and overhead glazing
- Structural glass applications
- Hurricane and high-wind glazing
- Certain security glazing applications
- Exposed-edge applications
- Large or demanding architectural glass configurations

Not All Ionoplast Interlayers Are SentryGlas®

SentryGlas® is a specific high-performance ionoplast interlayer manufactured by Kuraray. As alternative ionoplast products have entered the market, it is important not to assume that every product described as an "ionoplast" is equivalent to SentryGlas®.

Material properties, stiffness, strength, optical clarity, long-term durability, manufacturing consistency, technical documentation, testing history, certifications, and compatibility with specific glazing systems can vary by product and manufacturer. PGI has also observed differences in clarity and overall visual quality among various ionoplast products available in the market.

When a project has been engineered, tested, specified, or approved using SentryGlas®, substituting another ionoplast interlayer without proper technical evaluation can introduce performance, engineering, approval, aesthetic, or liability concerns. The interlayer should therefore be evaluated based on the actual product being supplied and the technical data supporting that product—not simply because it belongs to the same general material category.

So, Which Interlayer Should You Choose?

Choosing the right interlayer starts with understanding the application and the performance requirements of the complete glazing system. PVB remains the standard choice for a broad range of architectural safety glazing applications, providing reliable adhesion, glass-fragment retention, and flexibility across many common commercial uses. EVA can provide an alternative for certain specialized applications where its particular material characteristics or decorative options are beneficial.

For more demanding applications, including railings, canopies, façades, overhead glazing, hurricane-resistant systems, structural glazing, and applications requiring greater post-breakage performance, SentryGlas® can provide substantially greater stiffness and structural performance than conventional PVB.

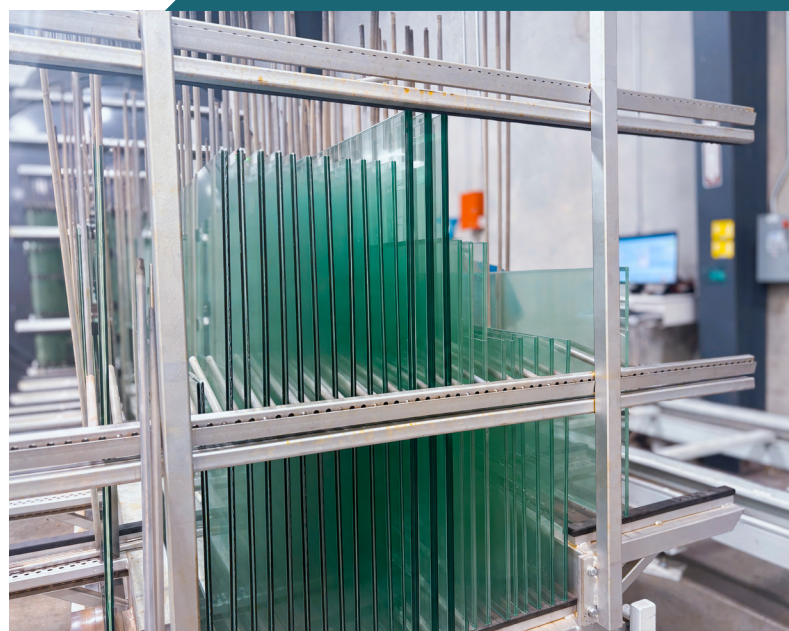
The interlayer should never be selected in isolation. Glass thickness, heat treatment, panel size, support conditions, design loads, framing systems, applicable codes, tested assemblies, and the intended use of the complete glazing system all need to be considered. The objective is not simply to select an interlayer; it is to select the complete laminated glass construction that best meets the performance requirements of the project.

Experience And Technical Support From PGI

Precision Glass Industries works with customers, architects, engineers, and glazing professionals to evaluate laminated glass requirements and identify appropriate product options based on the intended application. Our extensive experience with different interlayers, glass makeups, fabrication processes, and performance applications allows us to provide practical guidance as projects are developed.

With advanced laminated glass fabrication capabilities, consistent quality standards, and dependable lead times, PGI supports a broad range of safety, hurricane, security, acoustic, structural, and architectural applications. Our goal is to help the project team understand the available options and develop a laminated glass solution that appropriately balances performance, design requirements, constructability, and value.

For more information about laminated glass options for your next project, please contact us at architects@precisionglassindustries.com.



Disclaimer

The information provided by Precision Glass Industries is intended as general product and application guidance based on our experience with laminated glass and various interlayer technologies. PGI does not provide structural engineering services and does not assume responsibility for determining the suitability or performance of an interlayer or complete glazing system for a specific application. Final product selection, system design, engineering, and compliance with applicable codes and project requirements should be evaluated and approved by a qualified design professional or engineer familiar with the complete glazing assembly. PGI will work collaboratively with customers, architects, engineers, and other project professionals to provide product information and practical guidance to assist in developing an appropriate glazing solution.