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Comparing Window Glass Types

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When you buy windows, you may find yourself encountering a lot of industry terms about different types of glass. From annealed glass to laminated glass, many different types of glazing have been used in windows over the years.

Knowing the difference between these types of glass will help you distinguish between the many windows available for sale. If you need window glass replacement, knowing the differences can be important for selecting the right type of glass for your home.

Annealed Glass

Annealed glass, also called *non-tempered* or *float glass*, is a type of glass that can be easily custom cut, drilled and polished by a glass fabricator.

Annealed glass is strong, but not as strong as tempered glass. When it breaks, it tends to break into large, sharp shards that can cut skin and cause injuries. Annealed glass can be found in windows, display cases, tabletops and cabinet doors.

Tempered Glass

Tempered glass is manufactured through a process that involves heating the glass up to a very high temperature, and then cooling it rapidly. This cooling process forces the inside of the glass to pull away from the outside, putting the inside layer of glass into a state of tension and the outside layer into a state of compression.

The competing forces are what makes the glass stronger than annealed glass, and also causes the glass to break differently. When tempered glass shatters, it tends to shatter into small pieces. Tempered glass shards tend to be slightly cube-shaped and are far less likely to cause injury. For this reason, tempered glass is sometimes referred to as *safety* glass.

Tempered glass is less sensitive to higher temperatures and thus does not break as easily when exposed to extreme heat. It's often used in fireplace doors, oven doors, shower doors and car windshields.

Laminated Glass

Laminated glass is made of two panes of glass joined by a layer of polyvinyl butyryl (PVB). The PVB is sandwiched between two layers of glass, so it's extra strong. The PVB helps keep the glass stiff and sturdy, and even if the glass does shatter, the pieces stay in place because they've been fused to the interlayer.

Laminated glass (<https://www.pgtwindows.com/benefits-of-impact-resistance/>) is used in impact windows, car windshields, skylights and glass railings. In addition to being very strong and durable, laminated glass also has an element of soundproofing to it.

Insulated Glass

Insulated glass is a configuration of glass that puts two panes in one window, with a pocket of air or insulating gas in between. Insulated glass is highly energy efficient and can help keep your home cool and protected from extreme temperatures. The layer of gas in between the panes can diffuse heat transfer, thus ensuring that the windows are highly energy efficient.

All modern windows are to some degree insulated, but some types of insulated glass are more effective than others. If insulation is important to you, look for windows that use argon gas in between the panes to promote the best insulation possible.

Laminated Insulating Glass

Laminated insulating glass consists of a layer of air or gas between laminated glass and a pane of glass for insulation. Laminated insulating glass protects your home from loud exterior sounds, energy transfer that can cause hot spots or cold spots in your home, flying debris during storms, and high winds.

Laminated insulating glass is also highly secure and resistant to impacts from intruders. Just as these windows resist breaking during hurricanes, they also resist breaking during burglary attempts.

Double Vs. Triple Pane Windows

Double pane windows and triple pane windows are both a type of insulated glass. Double pane windows are the most popular option – probably because of their affordability and effectiveness. They're relatively lightweight compared to triple pane windows and cost less.

Triple pane windows, however, are the most successful at promoting total energy efficiency. If your priority is to have a completely energy efficient home, triple pane windows may be the best product for you.

Having Trouble Choosing a Glass Type? Know Your Goals In Advance

It can be hard to pick the right type of window glass for your home. Making some decisions in advance of shopping for windows can help.

- Know your budget. Different types of windows are sold at different costs. Knowing your budget can help you choose the windows and glass that best fit your needs.
- Know your goals and concerns. Are intruders a concern for you? Tropical storms? Energy efficiency? Know in advance what problems you want your new windows to solve, so you can find the best product that aligns with your budget.
- Visit showrooms. Visit showrooms to see window quality and beauty before buying your windows.

Finally, be sure to buy from a quality, reputable window manufacturer and dealer. Whichever windows you buy, purchase windows that are good quality. Buying a quality product from a reputable dealer can help ensure that the windows you purchase will perform to your expectations and last for a long time.

Consider the warranty, reviews and testimonials from customers and the level of service that you get from the window dealer. Purchasing windows from a company that you can trust is the best way to ensure that the windows you buy will leave you as happy as possible for as long as possible.



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