TM Windows LLC

Getting To Know Glass

Common glass is also known as annealed glass. To strengthen annealed glass, manufacturers can heat the glass. Heat strengthened glass is twice as strong as annealed glass and tempered glass is 4 times as strong.

In addition, annealed glass can be manufactured with tints and special coatings to provide UV protection. Reducing UV rays inside your residence can help you significantly reduce your monthly cooling expense. It can also provide protection from normal fading that can occur on your interior treatments (drapes, furniture, etc.).

Tinted glass should not be confused with automobile aftermarket films that are applied after the glass is installed. This process does provide UV protection, but over time the film will degrade thus diminishing the glass quality. With TM Windows tinted glass, there is no loss in UV protection over time because of the way the tint is manufacturer right into the glass itself.

There is also a clear glass coating called low e, which is applied to the glass to provided enhanced UV protection qualities. There are two types of low e coatings (soft coat or sputter and hard coat). See the chart below showing how much UV protection is offered by each glass option.

Glass Type	***% of UV Rays Blocked***
Tinted Glass	48%
Hard Coat Low e	35%
Soft Coat Low e	64%
Reflective Glass*	65%

The main reason you would consider glass with a low e coating is that it's clear and provides the highest optical rated glass. Tinting is typically a lower cost alternative method of reducing UV rays, but it will impact the exterior appearance of you residence and also impact views from inside your home & reduce the amount of natural lighting.

**** Reflective glass is typically used in office buildings, but is sometimes used in residential homes.***

There are some limitations with low e coatings. First, once they are applied, they are susceptible to scratching and shouldn't be washed. Therefore the best way to use low e coating is with insulated or laminated glass. It can be applied in between the glass so that it will never come in contact with damaging elements.

Here is a quick visual of the cross section of an insulated impact window glass that can block as much as 75% of all UV radiation and provide excellent insulation properties.