

"Annealed Glass" versus "Tempered Glass"?

Annealed Glass

Annealed Glass is glass that has been very slowly cooled after it has been made at over 1,500 degrees F. This slow cooling of the glass releases most of the internal stresses in the glass. All sheet or flat glass starts out as annealed glass. Virtually all glass award and recognition products are made from annealed flat glass. Annealed glass is not a safety glass.

Tempered Glass

Tempered Glass is annealed glass that has been re-heated to almost 1,200 degrees F and chilled down to room temperature very quickly with a high pressure cooled air quench. Tempered glass is up to 4 times as strong as annealed glass, but when it breaks it shatters into hundreds, or even thousands of very small pieces. These small pieces can still cause minor cuts, but major injuries are rare. Tempered glass is one of two kinds of "safety glass" (laminated glass is the other). All safety glass must meet federal standards and it is required to meet building codes in all public buildings, and most commercial and industrial buildings.

Tempered glass is considerably more expensive than annealed glass and it is rarely flat after tempering. No machining (edging, drilling, beveling or deep etching) can be performed after glass has been tempered. This would normally result in the glass shattering due to the high internal stresses in tempered glass. It will also void the tempering certification.

Etching on tempered glass is limited to a very light surface etch only. Extra caution should be taken when etching tempered glass as it may cause the glass to shatter due to the high internal stresses in glass that has been tempered.

When ordering tempered glass please specify if you require the certification logo etched on the glass, or if it should be omitted. All tempered glass supplied by our company is documented for proof of tempering certification.