

SAFETY GLAZING

The dangers of broken glass are readily apparent, especially where direct contact with people is possible. To minimise the risk of serious injury around the home, a specific section on human impact exists within the Australian Standard for Glass in Buildings - Selection and Installation (AS1288 - 2006). Safety glazing comes in two main varieties: laminated and toughened.

Laminated glass is manufactured by sandwiching two panes of annealed (untreated) glass together, either side of an interlayer (typically Polyvinyl Butyral). This composite panel is fused together under heat and pressure.

When broken, the annealed laminations will fracture but remain bonded to the interlayer. This behaviour realises improvements in safety and security. Laminated glass can be made up from a variety of panes, from low-emissivity through tinted glass, in many thicknesses.

Toughened glass is manufactured by heating and rapidly cooling annealed panes, a process known as thermal tempering.

The advantage of toughened glass is that it will handle much higher forces than annealed or laminated glass before destruction. Under extreme duress, it will shatter into numerous small pieces with dulled edges, minimising the possibility of human injury. Toughened glass is available in many thicknesses and compositions, from low-emissivity through to Solar Control Tints and patterned (privacy) glass.

