



What is Toughened Safety Glass?

Toughened glass or as others know it as tempered glass is in fact five times stronger than your average piece of glass (float glass).

When broken, toughened glass crumbles into small granular chunks of a similar size and shape, which is less likely to cause injury, if you were to compare it to an ordinary glass.

When ordinary glass is broken the glass splinters into random, jagged shards which is why toughened safety glass is recommended for areas in which human impact may occur.

Toughened glass is formulated by a controlled process of heating the glass to a temperature close to 600 degrees then once heated the glass needs to be very quickly cooled by using a compressed air.

This cooling process causes the surface to contract which forms a rigid outer layer over the glass. This toughening process is what makes the glass stronger than conventional glass and able to resist the impact of stress and temperature changes.

Different types of Glass Breaking



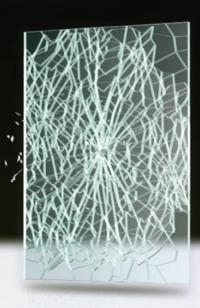
REGULAR GLASS

Breaks easily, producing long, sharp splinters.



TOUGHENED GLASS

Shatters completely under high levels of impact energy and few pieces remain in the frame.



LAMINATED GLASS

May crack under pressure, but tends to remain integral, adhering to the plastic vinyl interlayer.

What is Laminated Safety Glass?

Laminated glass is commonly used as a safety glass when security and injury are of concern.

Laminated safety glass technically has the same strength as regular glass but has a plastic interlayer between two panes of glass, holding them together. The PVB plastic interlayer is a tough resin which will hold the shards in place should the glass break.

This tough plastic resin situated between both pieces of glass provides a safe double-layered design which is why it is classified as one of our safety glasses. When laminated safety glass is smashed it forms a spider web affect in the glass and holds within the frame as depicted in the centre image above. For safety reasons, laminated glass must comply with Australian Standards 1288:2006 Glass in Buildings.





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