



Different window glass types

At its most basic level, all glass is made by heating sand until it melts and turns into a liquid. By changing the ingredients or process, or adding different coatings, the colour, strength and other properties of the finished glass can be altered, making it useful for a range of situations.

Most window glass is made using the float glass process. A sheet of molten glass is 'floated' on a bed of molten metal to create glass that is smooth and flat with a uniform thickness. The colour of glass can change depending on the mix of raw materials used. Low iron content, for instance, will produce extra-clear glass.

This guide introduces the most common types of glass used in windows and doors in New Zealand.



Low E glass

Low Emissivity or Low E glass has a special coating that can boost the benefits of double or triple glazing by reflecting heat back into the room instead of conducting it through the window. It is completely transparent, but when applied to one or more panes of glass it is highly effective at reducing heat loss through windows.



Glazing with lead lights

Lead lights are a popular traditional form of decorative glazing that adds character to windows and doors. The New Zealand Building Code allows lead lights to be used wherever annealed or safety glass can be used; there are, however, some limitations around the maximum individual pane size and total area of the lead-light glazing that can be used.



Safety glass

Glass is classified as a hazardous building material in the New Zealand Building Code, and safety glass is mandatory in areas that are identified as being at high risk of human impact, such as bathrooms, and for doors and larger windows. There are two main types of safety glass used in New Zealand. Both will help protect you and your family from serious injury if the glass breaks for any reason.

Laminated safety glass contains a thin layer of vinyl, which keeps the pane intact if it is broken.

Toughened glass is treated to make it extra strong, and will break into many small cubes instead of blade-like shards if it is shattered.

Safety glass will either be laminated glass or toughened glass and can be identified by a compliance logo marked with NZS 4223.3 in either permanent ink or an etch-marking. If there is no marking, it may not be safety glass and should be replaced.

Learn More about Safety Glass: <https://www.youtube.com/watch?v=dirbwEQKm5s>