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Laminate Glass

Laminate glass is 2 or more glass layers that are bonded together, typically using a PVB (polyvinyl butyral) plastic interlayer.

Standard production laminates usually have one or two interlayers between two pieces of glass.

6.4mm basic laminate, that can be offered as a safety glass, consists of:

3mm annealed glass / 0.38mm PVB (1 interlayer) / 3mm annealed glass

This glass will stay in one piece when broken, preventing large shards of glass causing serious cuts. Whilst this can offer some security by keeping the window aperture in-tact, it is easily penetrated.

Changes to Secure by Design, PAS24 and Document Q, has meant that 6.4mm is not sufficient to meet the entry level security standard of EN356 P1a. Here, 6.8mm glass is required and is made up as:

3mm annealed glass / 0.76mm PVB (2 interlayers)/ 3mm annealed glass

The double thickness of the PVB gives the laminate EN 356 P2a security level, this means it will withstand a greater impact and be more difficult to penetrate and enter a building.

Various laminate glass products can be manufactured using thicker glass types and multiple interlayers and by combining several layers of glass and interlayer.

However, standard 6.8mm laminate is made of 2 x 3mm annealed glass. The 3mm glass is delicate and can crack or splinter easily when handling, moving or glazing units, and single pieces.

Glazing may be tight with UK standard 28mm glazing beads, therefore, hammering beads without care may cause the outer 3mm glass to crack.

There is a tolerance of 1.5mm on laminated unit thickness and this means that a 28.8mm unit can measure 30.3mm. therefore it is advisable to drop down a spacer bar measurement - e.g.

6.8mm laminate / 18mm spacer / 4mm glass – to – 6.8mm laminate / 16mm spacer / 4mm glass

6.8mm laminate is taking over from 6.4mm in most applications and laminate volumes are increasing at a massive rate.

Cutting laminate has changed as new equipment is developed. In the early days before cutting tables were developed, laminates were cut in a crude way. Shelling and splinters were standard. They were part of the cutting process.

New developments in machinery have enabled laminate glass to be cut safely and to a higher edge quality. There is less shelling of the edges and most shelling would be well within in bead sight lines.

Regency Glass has invested in high quality and automated laminate cutting lines, minimising handling of the glass. Every care is taken to keep the edges and corners free from shells and splinters.

However, laminate glass units need to be handled with care, and certain practices need to be avoided. (See handling guide on next page.)

Handling Laminate glass units

1. REMEMBER this is generally 3mm annealed glass
2. The glass will be up to 50% heavier than standard glazing
3. Get additional help for large/heavy units
4. DO NOT place on uneven, solid surfaces such as paths, drives, concrete etc.
    a. Use wooden battens, cardboard, carpet, etc. to protect edges
5. DO NOT bang edges or place down quickly with force – i.e. heavy units need to be placed gently and not under undue force caused by their own weight if being carried by one person.
6. BE CAREFUL when hammering beads to not hit the glass with hard blows.