

GLASS

Glass is the key element of any showcase and should form an invisible protective barrier between the exhibit and the visitor.

THE BASE MATERIAL

At the heart of the world's glass industry is the float process - invented by Sir Alastair Pilkington in 1952. Molten glass, at approximately 1000°C, is poured continuously from a furnace onto a shallow bath of molten tin. It floats on the tin, spreads out and forms a level surface. Thickness is controlled by the speed at which solidifying glass ribbon is drawn off from the bath.

Thicker glass can have a noticeable green tint which can change the colour of exhibits when viewed through the glass, this green tint is a result of the iron content of the glass.

A low iron content glass is available which has a minimal green tint, trade names include Optiwhite™, Starphire™, Diamant™ and UltraWhite™.

SPECIAL COATINGS

Amiran™ glass by Schott has a low reflective coating applied to the glass at the production stage. The coating reduces reflection from 8% with normal glass to less than 1% with Amiran™ coated glass providing superb clarity of objects on display.



FABRICATION

We prefer the base glass material to be laminated together over a PVB interlayer to provide the benefits of safety, security and UV filtration.

Many concept schemes are developed assuming toughened glass can be used for cases, unfortunately toughened glass is seldom accepted by museums and it is important that designs are developed within the physical limitations of laminated glass.

PROCESSING

All-glass showcases require glass machined to very accurate dimensional tolerances with high quality polished edges.

Glass industry standards do not generally meet our requirements so for this reason we have our own in-house glass processing equipment.

GLASS JOINTS

There are two main formats of glass joints, a 45 degree mitred joint or a 90

degree flat joint. The bonding of glass joints is critical in terms of aesthetics and security.

For smaller cases with glass joints less than 2m long we use ultra clear UV cured adhesive which is rigid and as strong as the glass itself.

For larger cases it is necessary to use a more flexible adhesive to allow for differential thermal expansion and other movements associated with the building structure.

The choice of silicone colour can be very subjective and should be determined by the case finishes and the colour of gallery walls or displays which are seen behind the case.

STRUCTURAL CONSIDERATIONS

In the absence of building regulations directly relating to showcase glass specifications, we work with structural engineers to ensure that we meet the local building codes.