

## Display Windows

All the glazing to the shop front, display glass and returns is to comprise not less than 11.5mm laminated glass. The installer is to confirm that the fitting of the glazing conforms to the manufacturers' specifications in terms of adequate depth of rebates in the retaining framework.

Originally jewellery shops used internal grilles in their display windows for protection against smash and grab attacks but Triplex introduced laminated glass for jewellery shop windows in the late 1950s/early 1960s. The glass they sold then was generally 9.5mm, or, 10 mm with a 1.5mm Polyvinyl butyral (PVB) interlayer and this became the standard glazing for jewellery shop windows. The overall thickness of the glass now used is generally 11.5mm, but the interlayer is still 1.5mm of PVB. This glazing provides a degree of resistance against smash and grab attacks, but it is possible to make a hand hole through it within 10 to 15 seconds using a sledge hammer and an axe. It can only be regarded as adequate for jewellery sale shops, displaying low value bulky stock e.g. 9ct gold or low value watches, where access through a hand hole would enable only a limited amount of stock to be taken.

Thicker laminated glasses are available, but as illustrated recent smash and grab attacks, thicker glass does not necessarily give any additional protection. This is gained by additional layers of the PVB interlayer, or, the use of the more recent laminated glasses where polycarbonate is used as the interlayer. Glass/polycarbonate/glass is normally thinner and lighter than glass/PVB for a similar level of resistance and because of this has been recommended to jewellers for their main display windows in recent years.

## Security Glazing

A European Standard on Security Glazing is EN 356. The European standard has eight levels of resistance as follows:

Intruder Resistance					
BS EN 356	Drop Height mm	Number of Strikes	Impact Energy per Stroke (J)	Glass Thickness (mm)	Maximum Dimension (mm)
P1A	1500	3 in a triangle	62	6.8	3210 x 2000
P2A	3000	3 in a triangle	123	8.8	3210 x 2000
P3A	6000	3 in a triangle	247	9.1	3210 x 2000
P4A	9000	3 in a triangle	370	9.5	3210 x 2000
P5A	9000	3 x 3 in a triangle	370	10.3	3210 x 2000



Intruder Resistance					
BS EN 356	Sledge + Axe Min. No Blows Required	Thickness (mm)	Weight Kg/m2	Construction	Maximum Dimension (mm)
P6B	31	18 14	42.4 28.0	Glass/PVB Glass/Poly/Glass	3210 x 2000 2500 x 1500
P7B	51	28 16	61 31	Glass/PVB Glass/Poly/Glass	3210 x 2000 2500 x 1500
P8B	71	36 18	77 34	Glass/PVB Glass/Poly/Glass	3210 x 2000 2500 x 1500

Using this standard it should then be possible to specify glazing for high value jewellery display windows which will provide a good level of resistance to physical attack.

Current glazing materials such as the Romag 13.4mm glass/polycarbonate/glass gives good protection against daytime smash and grab and by adding 1 mm of polycarbonate to this they manufacturer are able to reach P6B. They are also able to reach this standard with normal 18mm laminated glass using PVB and this can be made in a larger size.

Suppliers:

- [Tecdur Glazing](#)
- [Essex Safety Glass](#)
- [Evander Glazing and Locks Ltd](#)
- [Romag](#)

