



# LAMINATED- PVB GLASS



- Laminated glass is a type of safety glass that holds together when shattered. In the event of breaking, it is held in place by an interlayer, typically of polyvinyl butyral (PVB) or ethylene-vinyl acetate (EVA), between its two or more layers of glass. The interlayer keeps the layers of glass bonded even when broken, and its high strength prevents the glass from breaking up into large sharp pieces. This produces a characteristic "spider web" cracking pattern when the impact is not enough to completely pierce the glass.

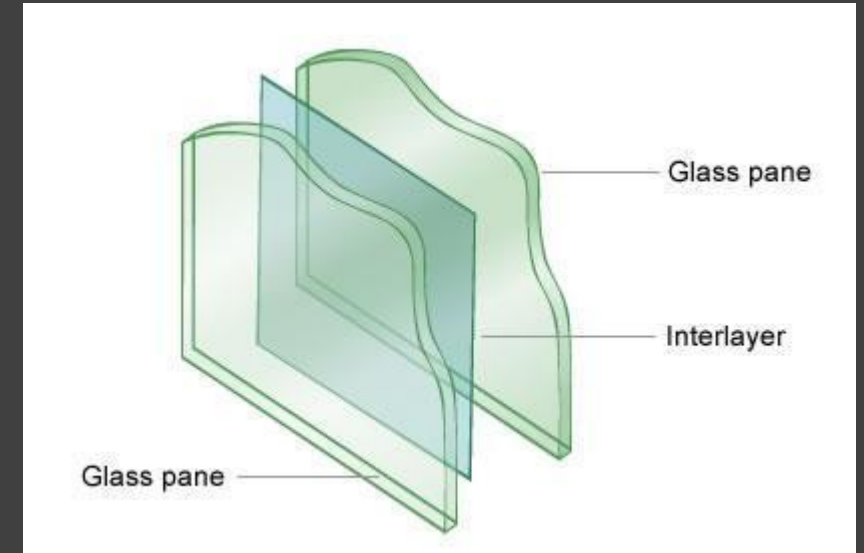


Laminated glass has been tested by repeatedly dropping a 225g steel ball from a height of nine metres. Each drop is equivalent to a hammer blow. The number of blows required to penetrate the glass is as follows:

Laminated strength		Number of blows
NS	3	1
HPR	8	2
HI	24	3

- Laminated glass is similar to the glass used in car windscreens. The PVB interlayer is clear and therefore invisible when viewed through the glass. However, interlayers can be tinted to produce colours for architectural applications.
- The thickness of a PVB interlayer affects the level of safety of the glass. By increasing the thickness, levels of safety in excess of the minimum legal requirements can be achieved.

Risk	PVB thickness	Rating
Low	0,38mm	1
Medium	0,76mm	2
High	1,52mm	3



## **STANDARD SIZES**

<b>Nominal glass thickness (mm)</b>	<b>Intruderprufe NS thickness (mm)</b>	<b>Intruderprufe HPR thickness (mm)</b>	<b>Intruderprufe HI thickness (mm)</b>	<b>Standard sizes (mm)</b>
3.0	6.38	6.76	7.52	2440 x 2000 2440 x 2134 2440 x 1830 3210 x 2250 3210 x 2440
4.0	8.38	8.76	9.52	3210x2440 3210x2440 3660x2440
5.0	10.38	10.76	11.52	3210 x 2250 3210x2440 3660x2440

### **SAFETY AND SECURITY RATINGS:**

1. Normal Strength (NS) for human impact safety (0.38 mm PVB interlayer);
2. High Penetration Resistant (HPR) for additional security (0.76 mm PVB interlayer);
3. High Impact (HI) for security in high-risk applications (1.52 mm PVB interlayer).