

Safety Glass

When ordinary annealed glass breaks, it often fractures into potentially lethal shards or splinters. In areas with a high risk of breakage due to human impact, Standards and Regulations govern that safety glazing is installed in critical locations. The architectural use of safety glass is primarily governed by BS 6262: Part 4: Glazing for buildings. Code of practice for safety related to human impact, in which critical locations are identified and the minimum standard of glazing material is detailed. Additional guidance is provided in Building Regulations for each country, i.e. Approved Document N for Wales, Approved Document K for England, Part V for Northern Ireland and Part P for Scotland. Compliance with BS6262: Part 4 also satisfies the requirements of Regulation 14 of the Health & Safety at Work Act. Safety glass is defined in EN 12600: Glass in building. Pendulum test. Impact test method and classification for flat glass, including the various classifications as a result of impact testing.

Glass may also be used as guarding, where it protects a change in finished floor levels, to prevent people from falling, such as balustrades, exterior glazing or screens. These situations are controlled by BS 6180: Barriers in and about buildings. Code of practice, EN 1991-1-1: Eurocode 1. Actions on structures. General actions. Densities, self-weight, imposed loads for buildings together with its UK National Annex and PD 6688: Recommendations for the design of structures to BS EN 1991-1-1, also the relevant Building Regulations for the country involved. The safe use of glass in furniture is controlled by EN 12521: Furniture. Strength, durability and safety. Requirements for domestic tables, and EN 14749: Domestic and kitchen storage units and worktops. Safety requirements and test methods. The use of glass overhead has guidance in BS 5516: Patent glazing and sloping glazing for buildings. Code of practice for design and installation of sloping and vertical patent glazing.

Security Glass

Glass resistant to manual attack is governed by EN 356: Glass in building. Security glazing. Testing and classification of resistance against manual attack. Bullet resistance is governed by EN 1063: Glass in building. Security glazing. Testing and classification of resistance against bullet attack and Explosion pressure resistance by EN 13541: Glass in building. Security glazing. Testing and classification of resistance against explosion pressure.

There is a British Standard that covers installation of security glazing, BS 5357: Code of practice for installation and application of security glazing, which details guidance, framing, and support for security and bullet resistant glazing. The frame strength and its ability to hold glass in place and the support of the frame itself are addressed through installation and fixing techniques. Security glazing must also comply with the requirements of BS 8000: Part 0: Workmanship on construction sites. Introduction and general principles, BS 8000: Part 7: Workmanship on construction sites. Code of practice for glazing, and BS 6262: Code of practice for glazing for buildings, as well as the recommendations of the glazing materials and sealant suppliers.

The specifier of security glazing must identify the risks involved and decide upon the appropriate level of protection, for manual attack, bullet resistance or explosion pressure resistance, classifications of different risk situations are determined within the relevant standard.