

# TECHNICAL GLOSSARY



## TECHNICAL GLOSSARY

The glossary of technical terms of glass

### **B-**

#### **Balustrade**

*A barrier or form of guarding, generally waist-height, which protects people from falling where there is a change in floor level, for example stairs and balconies.*

#### **Bead**

*A strip of wood, metal or other suitable material attached to the glazing surround to retain the glass.*

#### **Body-Tinted Glass**

*Transparent float glass with a consistent colour throughout its depth.*

#### **Bolted Glass Assemblies / Assembly Systems**

*Structural bolted glazing systems incorporating fixed or articulated bolts.*

## **Bow**

*A form of distortion in toughened and heat strengthened glass, inherent to the manufacturing process.*

## **Bullet-Resistant Glazing**

*Security glazing affording a defined resistance against the firing of specified weapons and ammunition*

## **C-**

### **Curtain Walling**

*Non-load bearing, typically aluminium, façade cladding system, forming an integral part of a building's envelope*

## **D-**

### **Day Lighting**

*The reorientation of daylight by means of systems incorporating reflective and adjustable surfaces or grilles. Day lighting systems re-direct natural light, distributing diffused light in a room space and prevent strong areas of glare.*

### **Double-Glazed Unit**

*Two panes of glass separated by a cavity and hermetically sealed in a factory, to provide thermal and/or acoustic insulation.*

## **E-**

### **Energy Balance**

*The difference between the amount of heat gain and heat loss through glazing. Also known as the "Effective U-Value".*

### **Emissivity ?**

*Emissivity is a surface characteristic of a material. It is the relative ability of a surface to absorb and emit energy in the form of radiation. Low-emissivity (Low E) coatings reduce the surface emissivity of the glass. The coatings are mainly transparent over the visible wave.*

### **Energy Absorptance (A)**

*The percentage of solar radiant heat energy absorbed and re-emitted externally and internally by the glass.*

### **Energy Reflectance (RE)**

*The percentage of solar radiant heat energy reflected by glazing.*

## **Energy Transmittance (T)**

*Percentage of solar energy flow transmitted directly through the glass.*

## **F-**

### **Facade**

*The front or face of a building.*

## **G-**

### **Glazing Materials**

*The materials required for the glazing of glass products such as glazing compounds, tapes, sealants and gaskets.*

### **Glazing**

*The securing of glass into prepared openings. It also refers to the collective elements of a building comprising glass, frame and fixings.*

### **G-Value (g)**

*Abbreviation or symbol for Solar Factor according to EN 410, formerly abbreviated to SF or TT.*

## **H-**

### **Heat-Strengthened Glass**

*Glass which has been heat-treated in order to increase its mechanical strength and resistance to thermal breakage. It has fracture characteristics similar to that of ordinary annealed glass and is not classed as a safety glass to BS 6206.*

### **Heat-Treated / Heat Treatment**

*A generic term for glass that has been heat-strengthened or thermally toughened in order to increase its mechanical strength and resistance to thermal breakage.*

## **L-**

### **Laminated Glass / Laminate / Laminating**

*Two or more sheets of annealed or heat treated glass are separated by one or more plastic inter layers (normally PVB) and subjected to heat and pressure, in order to ensure perfect adhesion between constituent elements.*

## **Light Reflectance (LRe)**

*The proportion of the visible spectrum that is reflected by the glass.*

## **Low Iron**

*Referring to extra clear glass, which has a reduced iron oxide content in order to lessen the green tinge inherent to ordinary clear float glass.*

## **Light Transmittance (LT)**

*The proportion of the visible spectrum that is transmitted through the glass.*

## **LSG Ratio**

*Light to solar gain (LSG) is the ratio of the visible light transmittance (VLT) and solar heat gain coefficient (SHGC) of a glass. In absolute percentage terms, a ratio greater than 1 signifies that the daylight passing through the glass is more than the sun's direct heat passing through it.*

## **O-**

### **Outdoor light reflectance (%)**

*Outdoor light reflectance, or daylight reflectance, is the percentage of light striking the glazing that is reflected back. It indicates the degree to which the glazing appears like a mirror from the outside.*

## **R-**

### **Reflective Coating / Coated**

*A metallic coating is applied to one side of the glass in order to significantly increase the amount of reflection by the glass of both the visible and infra-red (light and heat) range of the electromagnetic spectrum.*

## **S-**

### **Structural Glazing**

*Glass acting as a structural support to other parts of the building structure, for example glass fins. It can also refer to glass that is fixed by means of bolted connectors where the glass is not acting as a structural element.*

### **Self-Cleaning / Self-Cleaning Glass**

*Glass with a photocatalytic and hydrophilic coating. The coating harnesses the dual-action of UV light and rain (or water) to break down organic dirt and reduce the adherence of mineral material. The glass stays cleaner for longer and is easier to clean.*

## **Safety Glass**

*Glass which must have passed an impact test (BS 6206:1981) and either must not break or must break safely.*

## **Safety Critical Locations**

*Identified by BS 6262 part 4 and defined as glazed sections of a door, wall or other part of a building most likely to be subject to accidental human impact.*

## **Solar Heat Gain**

*Solar radiant heat, transmitted or re-emitted by glazing into a building, contributing to the build-up of heat.*

## **T-**

### **Translucent**

*Transmitting light but obscuring clear vision.*

### **Thermally Toughened Glass**

*Glass that has been subjected to a controlled heating and cooling process, in order to significantly increase its resistance to mechanical and thermal stress. Through the thermal toughening process, the glass attains its safe-breakage characteristics.*

### **Transom**

*A horizontal framing bar between glass panes. It can also be used to refer to a fanlight over a door.*

### **Thermally Insulating Glazing**

*Double-glazed units provide thermal insulation.*

### **Transparent**

*Clear, permitting vision.*

## **U-**

### **U-Value (W/m<sup>2</sup>\*k , Btu/h\*ft<sup>2</sup>\*F)**

*A measure of the rate of heat transferred (heat lost or gained) through glass (fenestration/ glazing specifically) by the combined effects of conduction, convection, and radiation when there is a temperature difference between the inside and outside of a building.*

V-

## Visible light transmittance (%)

*Visible transmittance, or daylight transmittance, is the percentage of visible light striking the glazing that will pass through. Visible transmittance values account for the eyes' relative sensitivity to different wavelengths of light. Glazing with a high visible transmittance appears relatively clear and provides sufficient daylight and unaltered views; however, they it tends to create glare. Glazing with low visible transmittance is best used in highly glare-sensitive conditions, but can create gloomy interiors under certain weather conditions and diminished views. It is unsuitable for many day-lighting applications since it does not provide enough light for typical visual tasks. While glazing can have a high visible transmittance, it does tend to obscure views, e.g., frosted or patterned glass. More Tools & Resources*