Glossary of Terms – U.K.

Acoustic laminate
a laminated glass with special interlayers with better acoustic performance than ordinary laminated glass.

Acoustic performance
simply how much noise does a product stop. It is the properties of a glass or glazing product which describe its airborne sound insulation, as measured by the reduction or attenuation of sound, at specific pitches or frequencies, in decibels (dB), or by sound reduction indexes, such as the mean sound reduction index (Rm), the weighted sound reduction index (Rw) or the road traffic sound reduction index (R TRA).

A Frame
a rack or stillage that is A shaped in profile.

Airborne sound insulation
the correct term for the type of sound insulation given by glass.

Airspace
an alternative term for the cavity in an insulating glass unit. See also Product Data Sheet on Pilkington Insulight™.

Annealed glass
another term for "ordinary" glass, most commonly used for float glass but Pilkington Texture Glass™ and Pilkington Pyroshield™ are also annealed glass. Glass that immediately after it has solidified into the required form, while still at a high temperature, is slowly cooled in order to minimise the internal stresses in the glass. The resulting glass can be cut by scoring and snapping and worked. It is, in fact "ordinary" glass as taken from the production line and stored in stock plates. Annealed glass, when broken, gives large fragments with sharp edges and so is not usually classifiable as a safety glass.

Applied Film
an organic (plastic) film stuck onto glass to give it additional properties, e.g. safety film.

Armed attack
an attack using firearms.

Blast resistance:
The ability of a particular type of glass to either withstand explosion pressure waves without breaking or to remain in position if broken.

Bomb Blast:
strictly the high pressure wave of gases (the blast wave) that move rapidly away from an explosion. However bomb blast will often refer to the damage caused by the blast wave and by any fragments associated with the bomb. These fragments can be part of the bomb, any container or vehicle it was carried in and any material that was carried along by the blast wave.

Borosilicate glass:
Glass with increased amounts of Boron. This means that the glass melts at a higher temperature than conventional soda lime silicate glass.

BR1:
BS EN1063 classification for bullet resistant glass to withstand .22 Rifle

BR2:
BS EN1063 classification for bullet resistant glass to withstand 9mm Parabellum Handgun = G0

BR3:
BS EN1063 classification for bullet resistant glass to withstand .357 Magnum Handgun = G1

BR4:
BS EN1063 classification for bullet resistant glass to withstand .44 Magnum Handgun = G2

BR5:
BS EN1063 classification for bullet resistant glass to withstand 5.56mm Rifle = R1

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BR6:
BS EN1063 classification for bullet resistant glass to withstand 7.62mm Rifle = R2

BS#:
stands for British Standard #. BS6262 part 4 is a safety glazing standard. A full list of glass related British Standards appears at the back of this guide.

BS EN #:
as European standards are agreed they are adopted as British Standards and so get a BS EN number. BS EN 1063 : 2000 is the bullet resistant standard. A full list of these appears with the British Standards at the back of this guide.

Bubble:
depending on context this could be:
- A bubble of air trapped between interlayers in a laminated glass, or
- A gas bubble that has become trapped within a piece of glass during manufacture.

Bullet Resistance:
the ability of a particular type of glass to withstand armed attack using a particular type of weapon not just by stopping the bullets, but also in terms of the spall ejected from the opposite face by the impact. BS 5051 grades bullet resistance with reduced spall (RS) from G0 through G1 and G2, for handguns, to R1 and R2 for rifles in order of stopping power, with a separate grade S86 for shotguns. This is being replaced by EN1063 standard see BR1 – BR6.

Butt joint:
a joint between the edges of adjacent panes, which have no frame, but are filled with adhesive sealant, commonly silicone sealant

dB:
see decibel.

dBA:
a weighted measure of sound that is designed to stimulate that of our ears. The international standard for this measure is called the 'A' Weighting Curve. Measurements made with this facility are, therefore, termed 'A' weighted decibels or, more concisely, dBA, to discriminate from those made in plain dB, which do not depend directly on human reaction.

Decibel (dB):
the scale used to measure or describe
- Loudness of sound or
- Sound insulation and sound reduction indexes (see acoustic performance), or
- Attenuation of radar and radio waves (see electromagnetic shielding.)

Desiccant:
a chemical drying agent that dries and helps remove any organic vapours from the air or gas trapped inside the cavity of an insulating glass unit. It is sometimes called a molecular sieve.

D.G.U.:
double glazing unit.

Dimensions:
the length and width or other appropriate descriptions of the size of a pane of glass. The glass thickness is not usually referred to as a dimension of the glass.

Door Louvre:
May be identified as a louver, grille, door grille or louver grille. Usually square or rectangular. Usually incorporates a perimeter frame on both sides of horizontal blades (core) that allows free air passage through the door louver.

Double glazing:
depending on context:
- Term often used for a replacement window
- Is also used for secondary sash glazing
- And insulating glass units

Double glazing unit:
an alternative name for insulating glass units comprising of two panes of glass.

Double window:
a window containing two panes of glass in the same vision area, but which are glazed separately, not formed into an insulating glass unit. It is sometimes described as secondary sash glazing.

E:
EN 357 classification for integrity, fire resistant glass.

Edge clearance:
the distance between the edge of the pane and the frame in which it is glazed. The clearance is required to allow for tolerances, avoid contact between the glass and it's framing and, in the case of drained glazing, to give sufficient room for water to drain away.

Edge cover:
the amount of glass within the rebate, i.e. covered by glazing bead. This is required to ensure the pane is effectively secured (i.e. a mechanical requirement) and also to ensure the edge seal of an insulating glass unit is protected from the weather.

Edge seal:
the hermetic seal around the edge of an insulating glass unit, designed to limit the rate at which water vapour penetrates into the cavity. The better performing edge seals are usually dual seal systems.

EI:
EN 357 classification for Insulation, fire resistant glass.

EN#:
European standard #. These are being adopted as British standards and so become BS EN#. A list of these appears amongst the British Standards at the back of this guide. **Enamel:**
a glassy material, which is melted into the surface of the base glass at high temperatures to form a ceramic coating.

EW:
EN 357 classification for partial insulation or reduced heat radiation, fire resistant glass.

External applications:
applications where glass or glazing products are used in positions exposed to natural weather.

Façade:
the face of a building, or the cladding covering it.

Façade element:
a part of the façade, such as a window or spandrel panel.

Face clearance:
the distance between the glass and the rebate upstand. This is usually filled with a gasket or sealant.

Fanlight:
the glazing immediately above the door.

Fire barrier:
an element of construction, such as a wall, partition or glazed screen, which gives an appropriate level of fire resistance.

Fire performance:
the length of time an element of construction, such as a wall, partition or glazed screen, continues to give fire resistance when tested under simulated fire conditions according to BS 476: Part 20.

Fire protection:
the action of a fire barrier in containing a fire.

Fire resistance:
the ability of an element of construction, such as a wall, partition or glazed screen, to maintain integrity and / or insulation when tested under simulated fire conditions according to BS 476: Part 20.

Fire resistant glass:
a glass that in an appropriate glazing system, allows the glazed screen door to achieve fire resistance for more than 30 minutes. The fire resistant glass may be a non-insulating glass, i.e. it satisfies only the integrity requirements of BS 476 for the time recorded during the test, or it may be fully insulating glass, i.e. it satisfies both the integrity and insulation requirements of BS 476 for the time recorded during the test.

Fire safety:
see fire protection.

Fixing:
depending on the context this may mean either:
- The method of retaining the glass in position on the building, or
- The action of installing the glass (glazing it).

G1/S:
obsolete British Standard Specification for bullet resistance.

G2:
see bullet resistance.

G3:
obsolete British Standard Specification for bullet resistance.

Gaskets:
solid, preformed glazing materials used to separate glass from other parts of the fixing or frame.

Georgian Wired:
the old generic name for the Pilkington Pyroshield™ range, see also Pyroshield™.

Glass:
Glass is a liquid that has cooled to a rigid state without crystallising. It is sometimes described as a supercooled liquid, which it is not. A supercooled liquid is still a liquid at a temperature below that at which is would normally solidify. Glass is actually a solid with an amorphous random or non-crystalline structure. The use of the term supercooled liquid suggests the idea of flow, but in fact glass is too rigid to flow at normal temperatures however long a force is applied to it. Glass consists of a network of silicon-oxygen-silicon bonds. These are randomly modified by the presence of calcium and sodium. This arrangement is completely random as it would be a liquid, it is not orderly or regular like the molecules in a crystal of sugar or ice. Because of this random network glass is non-ductile (it cannot be beaten or worked like say copper) and it is this that sets it apart from most other materials.

Glazing:
depending on the context it is either:
- The complete element of construction comprising the glass, the glazing materials and the fixing or frame or
- The glass or glass products itself, or
- The act of installing the glass or glass product.

Glazing bead:
the common mechanism used to retain glass in a frame.

Glazing compound:
a glazing material, which is soft and pliable, such as putty or silicone sealant and can be used as a gap filler.

Glazing materials:
the gaskets, glazing tapes, glazing compounds, bushes, sealants and other items required for the purpose of glazing a glass product.

Glazing seal:
another term for glazing compound or sealant.

Glazing spacer:
a small separator placed between the glass and frame. See also location blocks and setting blocks.

Glazing system:
the frame and the design or method of fixing the glass into the frame.

I.G.U.:
Insulating Glass unit.

Impact performance:
the impact resistance of a safety glass when tested according to BS 6206.

Impact resistance:
the classification according to BS 6206.

Impact resistant:
a euphemism for being a safety glass.

Impact safety:
an alternative term to impact resistance.

Inner pane:
the pane on the room side of an insulating glass unit or double window.

Installation:
depending on the context this is either:
- The act of glazing, or
- The finished glazing

Insulating glass:
a fire resistant glass, which gives both integrity and insulation for a specific period of time greater than 30 minutes. The Pilkington Pyrostop™ range of products is insulating glass. Do not confuse insulating glass with insulating glass units.

Insulating glass unit (or I.G.U.):
Commonly known as a double glazing unit (D.G.U.) a construction consisting of two or more panes of glass spaced apart with spacer bars to form a cavity between the panes. An edge seal is applied around each cavity to form a hermetic seal, minimising the ingress of the moisture into the cavity. A desiccant is incorporated in the spacer bar to dry up any residual moisture. Insulating glass units are assessed in their effectiveness at resisting moisture penetration by BS 5713. The air in the cavity can be replaced by another gas to give the unit specific thermal insulation or sound insulation properties. An insulating unit does NOT normally have any fire resistance properties unless it incorporates at least one pane of fire resistant glass and is glazed into an appropriate fire tested system.

Insulation:
depending on the context, this may mean either:
- The material applied to the back of spandrel panels to increase the thermal installation of the panels, or
- An alternative word for thermal insulation, or
- The length of time that a construction can give fire resistance in relation to the passage of heat, as defined in BS 476: Part 20.

Integrity:
depending on the context, this may mean:
- The ability of the glass to hold together after fracture, or
- The length of time that a construction can give fire resistance in relation to the passage of flames and smoke as defined in BS 476: Part 20.

Integrity only glass:
another term for non-insulating glass, see also fire resistance and integrity.

Interlayer:
the material used to separate and bond the plies of glass in laminated glass. The interlayer can be polyvinylbutyral, cast-in-place or intumescent.

Internal applications:
applications where the glass or glazing products are not exposed to natural weather.

Intumescent:
capable of expanding. In terms of glass and glazing, intumescent means specifically that the material expands with heat.

This term is applied to glazing materials as well as the interlayers of Pilkington Pyrostop™ and Pilkington Pyrodur™.

Intumescent interlayer:
an interlayer which intumesces in fire conditions, not only holding the laminated glass together, but also creating an effective barrier to smoke, flames and heat.

Laminate:
another term for laminated glass.

Laminated glass:
laminated glass is produced by combining layers of glass with plastic (PVB) or resin (CIP) interlayers to form sandwiches of material with specific design properties.

Laminated toughened glass:
laminated glass made with all the panes in toughened glass. This is often specified for overhead and structural glazing applications.

Leaded glass:
an alternative name for leaded lights.

Leaded light:
glazing which is formed either:
- In the traditional manner by using lead cames to fix small panes of glass, or
- By sticking applied leading on to the surface of a single pane.

Low E Glass:
see low emissivity glass.

Low emissivity glass:
simply a glass that keeps more heat in the building than ordinary glass. Glass is coated with a special metallic coating. To be a Low emissivity glass it has to have an emissivity less than 0.2 in the long wavelength radiation part of electromagnetic radiation. Uncoated glass has an emissivity of around 0.9. by comparison. The purpose of Low E glass is to reduce the radiation component of heat transfer across the cavity of an insulating glass unit. Since radiation is a significant component of the heat transfer across a cavity, insulating glass units incorporating Low E glass have much improved thermal insulation properties when compared to units without Low E glass (30% better insulation). Building Regulations across Europe are being tightened to make the use of Low E glass mandatory.

Low level glazing:
glazing which is wholly or partly within the critical location up to 800mm from finished floor level.

P1A:
BS EN 356 classification for manual attack.

P2A:
BS EN 356 classification for manual attack.

P3A:
BS EN 356 classification for manual attack.

P4A:
BS EN 356 classification for manual attack.

P5A:
BS EN 356 classification for manual attack.

P6A:
BS EN 356 classification for manual attack.

P7A:
BS EN 356 classification for manual attack.

P8A:
BS EN 356 classification for manual attack.

Pane:
a piece of glass.

Part #:
Part # refers to one of the many building regulations. Part N for example refers to safety glazing in England and Wales.

Partial Insulation:
Fire resistant glass that does not achieve give 30 minutes insulation required in BS 476 is often referred to as a partial insulation product. Pilkington Pyrodur™ is an example of this. European Standard EN 357 will have a partial insulation category for products that give 15 minutes insulation or more. This will be referred to as reduced heat radiation or EW.

Pinhole:
a small defect where part of a coating, enamel or backing paint is missing.

Pitch:
the frequency of a sound.

Polished Edge:
the edge of a piece of glass that has been first flat ground and is then polished to a high lustre. If all of the edges are polished it may be described as P.A.R. (Polished all round).

Polished wired glass:
a generic name for Pilkington Pyroshield™ Clear (see Product Data Sheet). Wired cast glass which has subsequently been ground and polished on both surfaces to make it transparent, i.e. Pilkington Pyroshield™ Clear and Pilkington Pyroshield™ Safety Clear.

Pyran:
Brand name for a Borosilicate glass, which is a clear, fire resistant glass. This product is produced by Schott glass.

Pyrobel:
Clear, Insulation, fire resistant glass made by Glaverbel. Pilkington Pyrostop™ should be offered as a substitute.

Pyrobelite:
Clear, Partial Insulation, fire resistant glass made by Glaverbel. Pilkington Pyrodur™ should be offered as a substitute.

Pyrodur™:
Pilkington Pyrodur™ is the brand name for clear (without wires), partial insulation, fire resistant glass.

Pyroshield™:
Pilkington Pyroshield™ is the brand name for a range of fire resistant glass with a welded steel mesh incorporated within the body of the semi-molten glass and formed by passing between two rollers, one of which forms an impression or pattern into the glass. This product is translucent and is called Pilkington Pyroshield™ Textured. The surface can be polished to make it transparent: this is called Pilkington Pyroshield™ Clear. It is sometimes referred to as Georgian wired. It is an integrity only glass. A safety version to meet BS 6206 Class C is also available.

Pyrostop™:
Pilkington Pyrostop™ is the brand name for a range of high performance, clear fire resistant glass. The products in this range all give insulation for a minimum of 30 minutes.

Polyvinylbutyral (PVB):
a type of interlayer used in the manufacture of laminated glass, by placing a sheet of the material between two panes of glass and curing under heat and pressure. This is the interlayer used in most laminated glass. In its unprocessed form PVB is opaque. It becomes tr4ansparent in the autoclave due to heat and pressure used, driving moisture from the interlayer.

Positive Image:
a term used in sand blasting and acid etching. It refers to the area of glass that has not been eroded by the sand or acid.

Profile:
a term used by window manufacturers to describe bar lengths of P.V.C. window section.

Public side:
the side of a one-way vision glass from which the other, private side is not visible.

PVB:
see polyvinylbutyral.

S86:
see bullet resistance.

Safe breakage:
either cracking without producing large openings or separate large sharp edged pieces (i.e. in a manner similar to laminated glass), or cracking into many small fragments (i.e. in a manner similar to toughened glass). Safe breakage is precisely defined in BS 6206. See Technical Bulletin Glass and Safety: depending on the context, this may be either:

- The ability of glass to reduce the possibility of piercing and cutting injuries when subjected to accidental human impact, or
- The reduction of hazard from breakage of glass in overhead glazing, or
- Fire protection

Safety backing:
an alternative term for safety film usually used in connection with mirrors.

Safety film:
a plastics film adhered to one surface of the glass with the intention of holding it together after fracture, so that the glass can be classified as a safety glass.

Safety glass:
a glass or glazing product, which conforms to BS 6206, which classifies the product as giving no break or safe breakage when the glass is tested. The glass is classified as Class C, Class B, or Class A (or Class Co, Class Bo or Class Ao, if the test is from one side only of an asymmetric product) according to the drop height achieved in the test.

Safety rating:
the classification achieved for a safety glass to BS 6206.

Sand blasting:
a process whereby the polished surface of glass is etched by exposure to high-pressure air blown sand or grit. The process is done primarily for decorative effect.

Sealant:
a glazing compound, which sets after application into a rubbery consistency.

Sealed unit/s:
another name for insulating glass units.

Security:
depending on the context this means either:

- The ability of glass to withstand manual attack or armed attack, or
- Blast resistance
- Electromagnetic shielding, or
- One-way vision.

Security glass:
a glass, which assists in giving security.

Security glazing:
a glazing system including security glass, which assists in giving security.

Setting blocks:
small packers, usually of hardwood, hard rubber or plastics, placed under the bottom edge of the glass to support it off the glazing platform and allow clearance for drainage and ventilation.

SG1:
EN1063 classification for bullet resistant glass to withstand Shotgun = S86.

SG2:
EN1063 classification for bullet resistant glass to withstand Shotgun, a new standard requiring 3 solid slugs to be fired into the glass.

Shading coefficients:
the total shading coefficient is a measure of the total amount of heat passing through the glazing (known as the total solar heat transmittance) compared with that through a single clear glass. Glass lets heat through in two ways; a proportion of the short wavelength radiation is transmitted straight through, while some is absorbed by the glass and re-radiated as long wavelength radiation.
The total shading coefficient is split into two parts relating to the proportions of the total solar heat transmittance, which are short wavelength,

- The shore wave shading coefficient
- And the long wavelength
- The long wave shading coefficient

Silica gel:
a chemical often used as a desiccant or molecular sieve.

Silicone sealant:
a type of glazing compound made from silicone material which is gunned into position and cures into an elastic solid. The product is more resistant to UV light and so is used in roof glazing and structural glazing situations where the sealant could be degraded due to exposure to UV light.

Single glazed:
fitted with only one pane of glass, neither an insulating glass unit nor a double window.

Single sealed:
usually used to describe an insulating glass unit that only has one seal. All Pilkington Insulight™ units are dual sealed.

Soda lime silicate glass:
ordinary window glass, including float glass, patterned glass and wired glass and any products made of these.

Sound insulation:
see acoustic properties.

Spacer/s:
depending on context can be:

- An alternative term for spacer bar or
- A glazing spacer

Spacer bar/s:
the preformed section, usually aluminium or steel, which spaces apart the panes of an insulating glass unit in order to form the cavity. The spacer bar also usually acts as a container for the desiccant in the insulating unit. They are available in a variety of widths usually acts as a container for the desiccant in the insulating unit. They are available in a variety of widths usually 6, 12, 16 and 20mm. They are also available in a variety of colours, silver, black, white, bronze and gold.

Spall:
the pieces of glass ejected from one face of a pane of glass when it is impacted from the opposite face. This term is commonly used in connection with bullet resistance, where a requirement fro reduced spall may be part of the classification system.

Stained glass:
depending on the context, this may mean:

- A traditional leaded light made with glass of different colours to form a picture or decorative pattern, or
- A pane of glass with coloured applied film and applied leading which looks like a traditional leaded light
- A piece of glass of the type used in the leaded light.

Stock sizes:
the glass as manufactured and stored ready for cutting down to cut sizes.

Structural glass:
glass used in a manner where it may be supporting other building components (e.g. glass mullions) or where it performs a semi-structural role (e.g. free standing glass protective barriers). The term may also be used for glass fixed using bolted connections (frameless glazing), even if it performs no structural function.

Tempered glass:
another name for toughened glass.

Template:
an exact size physical model of the shape of the glass to be manufactured.

Textured glass:
depending on context this can either be:

- A patterned glass, one of Pilkington Texture Glass range or
- Pilkington Pyroshield Textured or Pilkington Textured Safety

Thermal break:
a gap or a portion of low thermal conductivity in a metal frame, separating the inner and outer parts of the frame, designed to increase the thermal insulation of the frame.

Thermal insulation:
the ability to restrict the flow of heat. The lower the U value, the better the insulation.

Thermal properties:
depending on the context this could mean either:

- The U value, or
- The solar properties, or
- Both of the above

Thermal safety:
the determination of whether annealed glass is thermally safe, given that it has good quality edges. If a glass is not thermally safe it is necessary to use toughened glass instead.

Tight size:
the size of the opening in frame into which glass is to be glazed. The glass should be smaller than the tight size, to allow a suitable edge clearance.

Time/temperature curve:
the prescribed temperature rise in a fire test furnace as a function of the duration of the BS 476 test.

Toughened glass:
glass which has been heated past its softening point and chilled rapidly to build in a surface compressive stress which gives it greatly increased strength and makes it break into small fragments if broken.

Translucent:
letting light through, but obscuring clear vision.

Transmission:
an alternative word for transmittance, expressed as a percentage.

Transom:
a horizontal bar across an opening. Often used to refer to a window that is attached to the bar. Derived from Latin “transtrum” meaning a crossbar.

Transparent:
allowing through vision.

Triple glazing:
an alternative name for insulating glass units comprising three panes of glass.

Vandal resistance:
the ability to resist damage, as opposed to the ability to resist penetration. We do not have an “unbreakable glass”.

Vision area:
depending on the context, either:

- An oval with axis equal to the height and width of the pane, or
- The parts of a building façade or curtain wall which are intended for the passage of light

Vision panel:
depending on context, either:

- A lite, lite kit, window frame, door lite, vision panel, vision kit, vision lite, or window kit. All describe the same product, which is the metal or wood frame that holds the glass in place in the door. It is a pane of glass in a door that allows people to look through without needing to open the door. Usually square or rectangular, but can be manufactured in many different shapes including round, cross, triangle, half circle, hexagon or other such custom shapes. or
- A term used to distinguish a part of curtain walling as being distinct from the spandrel panel.

Visual distortion:
the warping of images when seen through the glass, due to the surfaces of the glass being not exactly flat and parallel. The term also sometimes applied to reflected images.

Visual quality:
an alternative term for optical quality.