

**Chemically Toughened Glass**—Chemical strengthening of glass is brought about through a process known as ion-exchange. Glass is submerged in a molten salt bath at temperatures below the annealing range of the glass. In the case of soda lime silica glass, the salt bath consists of potassium-nitrate. During the submersion cycle, the larger alkali potassium ions exchange places with the smaller alkali sodium ions in the surface of the glass. The larger alkali potassium ions 'wedge' their way into the voids in the surface created by the vacating smaller alkali sodium ions. This 'strengthened' surface may penetrate to a depth of only a few microns. It is not a recognised safety glass.

**Chipped Edge**—An imperfection due to the breaking of a small fragment from the cut edge of the glass. Generally this is not serious except in heat absorbing glass.

**Cladding Glass**—Toughened or Heat strengthened glass usually painted or silk-screened using ceramic ink as a colouring agent for use in curtain walls or as a cover to columns and walls. (See also Spandrel).

**Clear Glass**—Architectural clear glass is almost invariably of the soda-lime-silica type. Composition varies with manufacturer but is generally silica (SiO<sub>2</sub>) 70% to 74%, lime (CaO) 5% to 12% and soda (Na<sub>2</sub>O) 12% to 16%, with small amounts of magnesium, aluminium, iron and other elements.

**CNC Processing**—Computer Numeric Control. This type of machinery enables the processing of sophisticated shapes and hole contours in glass.

**Counter Sunk**—A hole drilled through the glass so that when a screw or bolt is inserted the head of the fixing is flush/level with the surface of the pane. The fixing must be isolated from the glass by nylon or soft lining material; there must be no glass-to-metal contact.

**Curtain Wall**—A non load-bearing wall of metal sections, glass and infill panels, which is carried directly by the structure of a building. Extensively used in modern high-rise office buildings.

**Curved Glass**—Glass, which is curved in form, produced by heating it to its softening point, so that it takes the shape of the mould. Annealed, toughened and laminated glass is available in curved form.

**Cut Sizes**—Any flat glass cut to specific dimensions. Also known as cut-to-size

## D

**Decorated Glass**—Clear or patterned glass processed by craftsmen for decorative effect. Stained glass, leadlights and sand-blasted, acid-etched, embossed and printed glass fall into this category. Decorative interlayers can also be incorporated in laminated glass.

**Desiccant**—Generally a pure molecular sieve- or silica gel-based product, the desiccant is placed within the cavity spacer bar of double-glazed units in order to dehydrate or to remove any residual moisture in the unit.

**Double Glazing**—In general, any use of two panels of glass, separated by an air space, within an opening to improve insulation against heat transfer and/or sound transmittance. In insulating glass units the air between the glass sheets is thoroughly dried and the space is sealed, eliminating possible condensat]ion and providing superior insulating properties.

**Dubbed Corner**—The removal or blunting of sharp corner edges, often done in conjunction with arissing, again it might be referred to as a chamfered corner.

## E

**Engraving**—Abrading the surface of the glass to achieve decorative designs by means of copper wheels, diamond points, carborundum pencils and other flexible drive tools. The engraving can consist of 'brilliant' cutting of various geometric shapes in the glass surface, which can be further polished.

**Edge Work**—Grinding, smoothing, bevelling or polishing the edge of flat or shaped glass.

**Enamelled Glass**—One face of the glass is enamelled, by applying a ceramic frit that is then fired into the surface of the glass at high temperature. Depending on the cooling regime employed, this then results in either a heat-strengthened or thermally toughened glass.

## F

**Fins**—Supporting glass panels, usually vertical, located at a 90° to the glazed surface, usually behind a butt joint.

**Fire-Rated Glass**—Glass that resists the penetration of flames and/or smoke for a period of time, in accordance with appropriate Standards.

**Flat Glass**—A general term that describes construction float glass, sheet glass, plate glass and rolled glass.

**Float Glass**—A transparent glass, the two surfaces of which are flat, parallel and fire polished so that they give a clear undistorted vision and reflection. Float glass is manufactured by floating a ribbon of molten glass over a bath of liquid tin which has a greater density than that of glass.

**Formed Glass**—Glass that has been heat-treated to mould patterns or designs into the surface of glass. Also known as slump glass.

**Free Standing Barrier**—A structural barrier where the glass is fixed to the structure, either adhesively or by clamping, along its bottom edge and has a continuous handrail attached to the top edge. The glass is designed to withstand all the imposed design loads and there are no balusters.

**Frame**—A structure manufactured from timber, metal, glass, or other durable material or combinations of materials, such as glass fins and structural sealant supporting the full length of all the edges of the glazed panel.

**Frosted Finish**—A surface treatment for glass, consisting of acid etching or sandblasting of one or both surfaces to diffuse transmitted light.

## G

**Glass Fin**—A piece of glass positioned to provide lateral structural support to a glass wall.

**Glass Flooring**—Composite of three or more layers of annealed or toughened glass with highly tear resistant interlayers with a non-slip coating fused onto the upper surface.