

GLOSSARY

ANSI - American National Standards Institute (ANSI Z97.1) for health and safety standards.

Ambient - The temperature of the room in which the test is being conducted.

Annealed Glass - The controlled process for making glass stronger and less brittle in which the glass is heated and then cooled.

Anodizing - A method of coating, coloring and finishing aluminum that both protects and beautifies the aluminum.

Approved - Acceptable to the authority having jurisdiction.

Authority Having Jurisdiction (AHJ) - The organization, office, or individual responsible for approving equipment, an installation, or a procedure.

Barrier to Radiant Heat – A barrier to radiant heat is a fire resistive glazing product that blocks heat transfer from one side of the glazing to the other. Typical applications of this type of glazing would be transparent fire rated wall units, or oversized (over 100 square inch) vision frames in temperature rise doors.

Borrowed Lite - A stationary window unit that is installed in an interior partition and that allows the passage of natural or artificial light from one area into an adjoining space.

Bug - The related information by means of a permanent marking that designates fire, safety or other glass.

Bullet-Resistant Glass - Glass that consists of multiple layers of laminated glass. It is designed to resist penetration from medium to super-power small arms and high-power rifles.

Butyl - An adhesive used in earlier models for glass retention. It is petroleum product that requires no curing or hardening. Butyl is available in rolls of approximately 15 feet. It is available in various thicknesses and shapes. It is not fire rated.

CPSC - Consumer Products Safety Commission (CPSC 16CFR 1201).

Category I – Impact safety level designated by “code of federal regulations” part 16. (16 CFR). “Category I” glazing materials are subjected to impact of 100 lb. bag swung from 18” drop height (approx. 150 ft/lb impact), with no single piece of glazing material greater than 9 square feet in surface area. Cat I resembles an 85 lb. child running into the glazing material.

Category II – Impact safety level designated by “code of federal regulations” part 16. (16 CFR). “Category II” glazing materials are subjected to impact of 100 lb. bag swung from 48” drop height (approx. 400 ft/lb impact), with any piece of glazing material greater than 9 square feet in surface area. Cat II resembles a full-grown adult running into the glazing material.

Ceramic - Material known for its outstanding heat resistance. Used in certain fire-rated glazing materials, such as the FireLite family of products.



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Classified - Products or materials of a specific group category that are constructed, inspected, tested, and subsequently reinspected in accordance with an established set of requirements. The classification process is performed by an organization acceptable to the authority having jurisdiction.

Decorative Glass – Art glass; cathedral, stained, or patterned glass.

Delamination - The failure of the bond between layers, as when glass separated from the laminate, or when paint peels from the substrate beneath it.

Dessicant – An extremely porous crystalline substance used to absorb moisture from within the sealed air space of an insulating glass unit.

Double Seal Units – Insulating glass with two materials used to form the seal of the glass.

Dry Glazing - A method of securing glass in a frame by use of dry, preformed, resilient gasket without the use of a compound.

Egress – A path or means of going out of a building or structure, exit.

Fire Door - The operable component of a fire door assembly designed to provide a specific degree of fire protection, while at the same time allowing building occupants to pass through.

Fire Door Assembly - Any combination of a fire door, a frame, hardware, and other accessories that together provide a specific degree of fire protection to the opening.

Fire Protection Rating - The designation indicating the duration of the fire test exposure to which a fire door assembly or fire window assembly was exposed and for which it successfully met all acceptance criteria as determined in accordance with NFPA 252 / NFPA 257 / UL 9 / UL 10C / ASTM E-163 / ASTM E-152 / UBC 7-2.

Fire Resistance Rating - The time, in minutes or hours, that materials or assemblies have withstood a fire exposure as established in accordance with the test procedures of NFPA 215 / ASTM E-119 / UL 263. (Wall Assemblies)

Fire Wall - A wall extending from foundation through to the roof to subdivide a building in order to restrict the spread of fire.

Fire Windows - Fire endurance-rated glazing material.

Fire-Rated - A label given to a material after it has passed specific fire testing.

Flammable – Easily ignited and capable of burning rapidly and sustaining flame. “Flammable” is synonymous with inflammable.

Flash Point - Minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when heated.

Float Glass Process – A commercial methods of manufacturing glass in which molten glass is fed into a float bath of molten tin.



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Fusible Link - Two pieces of metal held together by low-melting-point solder.

General Conditions - The main provisions or qualifications to be followed, usually standardized, set forth between two parties in a contract.

Glass Ceramic - See ceramic. Also, see FireLite.

Glazing -The work of installing glass in a frame.

Glazing Compounds - A soft dough-like material used for filling and sealing the space between a pane of glass and its surrounding frame.

Glazing Material - A transparent or translucent material used in door assemblies and windows, including annealed glass, coated glass, tempered glass, laminated glass, wire glass or combinations thereof.

Heat Transfer (ASTM E-119 / UL 263) The degree to which an assembly (usually a door or wall) will transfer heat from one side to another.

Heat Strengthened Glass - Similar to tempered glass, it is made by heating annealed glass uniformly and then cooling it more slowly than tempered glass.

Hose Stream Test - One component of the testing process for fire-rated glazing and framing in North America. Glass that has been heated in a test furnace is subjected to water from a fire hose to gauge the ability of the complete assembly being tested to withstand thermal and pressure shock.

Impact Resistance - The measurements by which it is determined how much impact is required for breakage.

Impact/Safety Rating - Measures the ability of an assembly (ie. glass) to withstand impact. Ratings are given in levels based on the amount of force the members can resist. Impact safety ratings are often required where glass is regularly exposed to contact by people or objects.

Insulating Glass Unit (IGU) - Two or more lites of glass spaced apart and hermetically sealed to form a single glazed unit with an air space between each lite.

Labeled Door (or Frame) - A door or frame that conforms to all the applicable requirements - in respect to fire or impact resistance - of a nationally recognized testing authority and bears a label designating the fire rating.

Labeled - Equipment or materials that have been tested by an authorized agency (UL, WHI, etc.) Must be labeled to show the acceptable level of use to authority having jurisdiction. The label may be a permanently affixed tag, etched logo, or embossed stamp.

Lami – Another name for laminated glass (see laminated glass.)

Laminated Glass - Two or more lites of glass permanently bonded together with one or more interlayers. Product can be cut to size with standard cutting tool, in most cases.

Light Transmittance – The percentage of visible light able to pass through. A substrate such as glass.

Listed – An assembly or materials included in a list published by an organization (ie UL or WHI) acceptable to the authority having jurisdiction and concerned with product evaluation. The listing states either that the



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assembly or material meets appropriate standards or has been tested and found suitable for use in a specified manner. Maintaining periodic inspection of listed products during manufacturing and or assembly process is required by said organization.

Low E Glass - Low emissivity glass; a type of ultraviolet reflective glass that is popular in residential and office applications.

Model Building Code – A resource of codes that have been written and adopted as the law or standard in a geographical area.

Monolithic Glass - Glass composed of a single layer.

Mullion - A vertical member set in a double door opening that allows both leaves to be active. It can be fixed or removable. A mullion also can occur between a door and a side light or a separate, framed, glazed area, such as a transom.

Mullion, Window - The separate steel member or members used to join windows in a multiple window opening, either horizontally or vertically.

Muntin - A bar member supporting and separating pane of glass within a sash, door, or glazing frame.

Muntin, Window - A tee-shaped bar in a frame or ventilator, dividing the glass.

NFPA - National Fire Protection Association.

Neoprene – A synthetic rubber having physical properties closely resembling those of natural rubber but not requiring sulphur for vulcanization. Extremely good weather resistance (both heat and cold) with ultraviolet stability.

Obscure Glass – Mainly used for decoration, diffusion, or privacy. The design is pressed into the glass during the rolling process. There are many patterns available.

Opaque – Impenetrable by light.

Plant-On - A decorative trim applied to the surface of a door.

Poly Vinyl Butyral (PVB) – Vinyl inner layer of laminated glass.

Primer – An undercoat or chemical applied to a surface to improve the adhesion, durability, and appearance of a topcoat or the bond of an adhesive. A product (chemical) used to prepare metal bonding areas and ensure a strong bond between the glass part and the adhesive.

Rails - The horizontal members of the door, to which closers can be applied or trimming for floor condition (bottom rail).

Safety Glass – A general term used for either laminated or tempered glass. Only glass which has been laminated, however, can specifically be called laminated safety glass.

Safety Rating - See impact/safety rating.



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Sandblasting- Sand blown by compressed air for etching or decorating glass.

Score – The term used to describe a “cut” on the surface of a glass or mirror with a glass cutter.

Sealant – Any material used to seal joints or openings against the intrusion or passage of any foreign substance, such as water, gases, air or dirt.

Setting Block – A small piece of neoprene or other suitable material that positions the glass in the frame or opening. A part on which the glass rests in place.

Shard – A sharp piece or fragment of glass.

Side Light - A wood or metal frame (may be fire rated) prepared for the application of glazing material to be attached alongside the door opening frame.

Silicone – A chemical used as a lubricant or as a sealant with a wide variety of usage.

Solvent – A liquid in which another substance can be dissolved.

Sound Transmission Class (STC) - A single number rating derived from individual transmission losses at specified test frequencies. It is used for interior walls, ceilings, and floors and in the past was also used for preliminary comparison of the performance of various glazing materials. The higher the STC number, the greater the sound transmission loss, or sound dampening.

Stiles - The vertical members of the door, to which the lock and hinges are applied.

Stress Cracks – Cracks resulting from unusual forces acting on the glass body.

Tape Glazing – Installing glass or products with some type of sealing tape for glass.

Temperature Rise – The ability of a door assembly to limit the temperature rise on the unexposed side of fire doors to 450 degrees F’ during the first 30 minutes of the standard fire test. Door type frequently used for protection of exit stairwells, assuming a higher temperature would provide enough radiant heat to discourage, if not prevent, occupants from passing by the door during an emergency. Maximum visible light of 100 square inches.

Tempered Glass - Flat or bent glass that has been heat-treated to a high surface and or/edge compression. Fully tempered glass, if broken, will fracture into many small pieces (dice) which are more or less cubical. Fully tempered glass is approx. four times stronger than annealed glass of the same thickness. Cannot be cut after it’s manufactured. (Outside of North America sometimes called “toughened glass”).

Tempering – Strengthening glass with heat.

Tensile Strength – Resistance of a material to a tensile force (a stretch). The cohesive strength of a material, expressed in psi.

Thermal Break – The pored and debridged sparation of an aluminum frame for thermal improvement.

Thermal Movement – Movement and changes in a structure caused by temperature changes.



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Thermal shock - Since glass expands and contracts with temperature changes, it experiences stress when its surfaces are exposed to contrasting temperatures at the same time. Glass that cannot withstand this “thermal shock” will shatter or explode out of the frame under these conditions, and therefore cannot receive a fire rating greater than 20 minutes in the United States.

Tinted Glass – Glass to which a small amount of color has been added consistently throughout the glass BATCH. The tinting reduces glare and absorbs heat.

Transom - An opening in a fire door frame above the door opening that is filled by a solid panel or with glazing material.

Transparent – Permitting light to come through without distortions so that objects on the other side can be seen clearly.

U value – Measures the overall efficiency of a complete insulation system.

Ultra violet (UV) Light – Part of the light spectrum. Ultra violet rays can cause chemical changes in rubbery materials and polymers.

Vacuum Cup – A tool used for picking up glass.

Viscosity – A measure of the flow properties of a liquid or paste.

Weep Holes – A small opening in a wall or window- sill member, through which water may drain to the building exterior.

Wet Glazing – A method of sealing glass in a frame by use of sealants rather than dry-glazing gaskets.

Wind Load – Force exerted by winds on building panels and complete structures; may be inward (positive) or outward (negative).

Wired Glass (polished) - Rolled glass having a layer of meshed wire completely imbedded as nearly as possible to the center of the thickness of the lite. Approved polished wired glass is used as transparent or translucent fire protection rated glazing. It breaks more easily than unwired glass of the same thickness.