

# A-1 ALUMINUM INC.

## *Commonly Used Window Terms*

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When deciding on your replacement windows and which company to purchase from, it is always helpful to be able to understand their unique language. The glossary of terms that follows provides some of the common terms associated with replacement windows that you may encounter when reviewing companies and products.

### **A**

#### *Air Chambers*

Small honeycomb spaces within the sash and frame, which help to insulate and strengthen the window.

#### *Air Infiltration*

The amount of air that passes between a window sash and frame. In windows it is measured in terms of cubic feet or air per minute, per square foot of area. The lower the number, the less air the window lets pass through.

#### *Air Latch*

Latch mechanism on the interior face of the sash that retains the window in a partially open position for ventilation.

#### *Angled Exterior*

A sloped extension from the frame that adds an aesthetically pleasing dimension to the exterior of the window.

#### *Argon Gas*

An odorless, colorless, tasteless, nontoxic gas that is six times denser than air. It is used to replace air between the glass panes to reduce temperature transfer.

#### *Awning Window*

A top-hinged window that swings outward for ventilation.

### **B**

#### *Balance System*

Device for holding vertically sliding sash in any desired position through the use of a spring or weight to counterbalance the weight of the sash.

#### *Bay Window*

An angled combination of three windows that project out from the wall of the home. The windows are commonly joined at 30- or 45-degree angles.

#### *Beveled Exterior*

An angled extension from the frame that adds an aesthetically pleasing dimension to the exterior of the window.

#### *Bow Window*

An angled combination of windows in 3-, 4- or 5-lite configurations. The windows are attached at 10-degree angles to project a more circular, arced appearance.

#### *Butyl*

A rubber material that seals the glass to the spacer, creating an airtight and watertight IG unit. Butyl has the lowest gas permeability of all rubbers.

### **C**

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### *Cam Lock and Keeper*

The mechanisms that pull the sash together when placed in the locked position.

### *Capillary Tubes*

Small hollow tubes that penetrate the spacer system of an insulating glass unit. They allow pressure equalization between manufacturing locations, shipping, and installation locations. Since the insulating glass unit is not permanently sealed, the air space cannot be filled with Argon gas.

### *Casement Window*

A window with a side-hinged sash that opens outward for ventilation.

### *Center of Glass U- and R-values*

The U- and R-values measured from the center of the glass to 2-1/2" from the frame.

### *Condensation Resistance Factor*

A measure of the effectiveness of a window or glazing system to reduce the potential for condensation. The higher the condensation resistance factor, the more efficient the window and glazing system.

### *Conduction*

Energy transfer from one material to another by direct contact.

### *Convection*

Heat transfer by currents that flow from a warm surface to a colder one.

### *Coved Exterior*

An arced extension from the frame that adds an aesthetically pleasing dimension to the exterior of the window.

## **D**

### *Dead-air space*

The space between the panes of glass of an I.G. Unit.

### *Deadlite*

A piece of glass or IGU with a sash profile around it; not set within the main frame of a window unit.

### *Desiccant*

A material used in insulating glass to absorb water vapor, which causes fogging.

### *Double Hung Window*

A window that has two operable sash which slide vertically.

### *Double-strength Glass*

Glass with a thickness of approximately 1/8".

### *Dry glazing*

An alternative method of placing glass in a door or window. No glazing mastic is used. Dry glazing is recommended whenever reflective coatings are glazed to first surface.

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### *Dual-durometer*

An elastomeric material with two different degrees of hardness.

## **E**

### *Egress Code*

The code that requires a minimum opening of a window for persons to exit or firefighters to enter a building.

### *ENERGY STAR®*

ENERGY STAR® is an independent U.S. government program establishing a standard set of guidelines to recognize the energy efficiency of various products. ENERGY STAR® guidelines are used in conjunction with a variety of building materials, including windows and patio doors. Over the past ten years, ENERGY STAR® guidelines have helped double the efficiency of windows they endorse.

### *Extruded screen frame*

Different from a Roll formed frame; this frame is pressed through a form or die.

## **F**

### *Fusion-welded*

The process of joining materials by melting them together with extreme heat (over 500°F), resulting in the materials uniting into a one-piece unit.

## **G**

### *Geometric*

Specially designed windows classified as either Straight line Geometrics such as rectangles, triangles, trapezoid, octagons, pentagons, etc., or Radius Geometrics which include half-rounds, quarter-rounds, full-rounds, sectors, ellipses, eyebrows, etc.

### *Glass*

An inorganic transparent material composed of sand (silica), soda (sodium bicarbonate), and lime (calcium carbonate) with small quantities of alumina, boric or magnesia oxides. Available Styles: Clear, Bronze, Grey and Tinted. · Glazing - The process of sealing the glass to the sash.

### *Glazing Bead*

A strip of vinyl which surrounds the edge of the glass and holds it in place in conjunction with other sealants.

### *Grids*

Decorative horizontal or vertical bars installed between the glass panes to create the appearance of the sash being dividing into smaller lites of glass.

## **H**

### *Head*

The horizontal top portion of the main frame.

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### *Head expander*

A vinyl shape cut the width of a product and placed on the head, fitting over it snugly. This piece is used as a filler to expand or lengthen the unit from the head and take up the gap in the opening between the unit and the opening in the unit.

### *Hook accessory*

Accessories that snap to the hook frame and provide easy installation.

### *Hopper*

A window with a bottom-hinged sash that opens inward for ventilation.

## **I**

### *I.G. Unit (Insulating Glass Unit)*

Two or more lites of glass separated by a spacer and hermetically sealed at the glass edges.

## **J**

### *J-channel*

Integral extension on the outside of a new construction window that eases installation on siding applications.

### *Jamb*

Vertical sections of the main frame.

## **K**

### *Keeper Rail*

The horizontal section of the sash where the keeper is attached.

### *Keeper Stile*

The vertical section of the sash where the keeper is attached.

### *Krypton Gas*

An inert, odorless, colorless, tasteless, nontoxic gas which is about 12 times denser than air. It is used to replace air between the glass panes to reduce temperature transfer and deter convection. Used when a higher performance is desired than that produced with Argon gas.

## **L**

### *Laminated Glass*

Two or more pieces of glass bonded together over a plastic interlayer.

### *Lift Handle*

A handhold for raising and lowering the sash. Handle implies that the handhold is not continuous across the sash.

### *Lift Rail*

A handhold for raising and lowering the sash. Rail implies that the handhold is continuous across the sash.

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### *Lite*

A unit of glass in a window.

### *Lock Rail*

The horizontal section of the sash where the cam lock is attached.

### *Lock Stile*

The vertical section of the sash where the cam lock is attached.

### *Low E (Emissivity) Glass*

Glass with a transparent metallic oxide coating applied onto or into a glass surface. The coating allows short-wave energy to pass through but reflects long-wave infrared energy, which improves the U-value.

## **M**

### *Main Frame*

The head, sill and jambs sections of a window.

### *Mechanically Fastened Frame*

Refers to frames fastened with screws.

### *Meeting Rail*

The horizontal sections of a pair of sash that meet when the sash are closed.

### *Meeting Stile*

The vertical section of a pair of sash that meet when the sash are closed.

### *Mesh*

Fabric made of either fiberglass or aluminum, used in the making of screens.

### *Mullion*

A vertical or horizontal connecting unit between two or more windows.

## **N**

### *Nailing Fin*

An extrusion attached to the main frame of a window used to secure the unit to the rough opening.

## **O**

### *Obscure Glass*

Glass that has been made translucent instead of transparent.

### *Oriel*

A window with the meeting rail located off center of the frame. Most oriels have a 60/40 configuration.

### *Overlapping and Interlocking Meeting Rail*

A patented meeting rail which overlaps and interlocks both sash.

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### **P**

#### *Patio door*

A glass door that slides opens and close on adjustable tandem rollers. Available in 2- or 3-lite configurations with the operable panel available in any position.

#### *Picture Window*

A window that has no moveable sash.

#### *Pivot Alignment System*

An exclusive hinge-type system used on hung windows. This system attaches the sash to the balance, creating perfect alignment between the sash and frame, while allowing the sash to tilt inward for cleaning.

#### *Pull Handle*

A handhold for sliding the sash back and forth. Handle implies that the handhold is not continuous across the sash.

#### *Pull Rail*

A handhold for sliding the sash back and forth. Rail implies that the handhold is continuous across the sash.

#### *Pull Stile*

A handhold for sliding the sash back and forth. Stile implies that the handhold is continuous across the sash.

### **R**

#### *R-value*

Resistance a material has to heat flow. The higher the R-value, the greater the resistance.

#### *Radiation*

Wave energy transmitted directly from one object to another through the atmosphere or through transparent or translucent materials. The energy radiated is transmitted, absorbed, reflected or a combination of all three.

#### *Rail*

The horizontal sections of the sash.

#### *Raised Exterior*

An angled extension from the frame that adds an aesthetically pleasing dimension to the exterior of the window.

#### *Relative Humidity Condensation Point*

The relative humidity level at which visible water vapor or other liquid vapor begins to form on the surface of the sash or frame, based on an inside temperature of 70E F and an outside temperature of 0E F. The higher the percentage, the more moisture the air can hold before condensation will occur.

#### *Roll formed Screen Frame*

A method of fabrication in which a flat (usually metal) material is placed on a machine where the material is formed into shape using differently shaped rollers and pressure.

### **S**

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### *Sash*

The part of the window which contains the glass.

### *Sash Alignment System*

An exclusive hinge-type system used on hung windows. This system attaches the sash to the balance, creating perfect alignment between the sash and frame, while allowing the sash to tilt inward for cleaning.

### *Shading Coefficient*

The ratio of solar heat that is transferred through a glazing material relative to the solar heat transferred through 1/8" clear glass. The lower the number the more efficient the window is at reducing solar heat gains.

### *Sill*

The horizontal, bottom section of the main frame.

### *Sill Extender*

An extrusion that is attached to the bottom of the window to cover the gap between the sill and the rough opening.

### *Single Hung*

A window in which one sash slides vertically and the other sash is fixed.

### *Single-strength Glass*

Glass with a thickness of approximately 3/32".

### *Slider Window*

A window in which the sash move horizontally. Sliders are available in a 2- or 3-lite configuration, with the 3-lite having operable end vents.

### *Sloped sill*

The sill of the window that has a downward slope to the outside. This sill has sufficient degree of slope to aid in water runoff.

### *Solar Heat Gain*

The percentage of heat gained from both direct sunlight and absorbed heat. The smaller the number, the greater the ability to reduce solar heat gain.

### *Spacer*

Material placed between two or more pieces of glass in order to maintain a uniform width between the glass, and prevent sealant distortion.

### *Stepped Sill*

An exclusive triple-stepped, sloped sill design.

### *Stile*

The vertical sections of the sash.

### *Stucco Fin*

An extrusion used in stucco home installations that is attached to the main frame to create a smooth, finished look for both the window and the stucco.

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### **T**

#### *Tape Glazing*

Two-sided tape used to secure and seal the glass to the sash.

#### *Tempered Glass*

Glass with a surface compression of not less than 10,000 psi, or an edge compression of not less than 9,700 psi. When broken, the glass breaks into pebbles instead of shards.

#### *Tilt Latch*

Mechanism that unlocks the sash and allows it to tilt in from the main frame.

#### *Tilt-in/lift-out sash*

A sash that can be tilted to the interior and removed for cleaning and is manufactured by welding.

#### *Total Unit U- and R-values*

The U- and R-values of the window calculated from the average of the center of glass, edge of glass and frame U- and R-values. It is the reciprocal of the R-value.

#### *Tri-durometer*

An elastomeric material with three different degrees of hardness.

### **U**

#### *U-value*

Amount of heat transferred through a material. The lower the U-value, the slower the rate of heat flow and the better the insulating quality.

#### *UV Block*

The percent of ultraviolet rays blocked from being transmitted through the glass. The higher the number the lower the percentage of ultraviolet rays transmitted through the window.

### **V**

#### *Vent-lok*

Latch mechanism on the interior face of the sash which retains the window in a partially open position for ventilation.

#### *Visible Light Transmittance*

The percentage of light that is transmitted through glass in the visible light spectrum (380 to 720 nanometers). The higher the number the higher the percentage of visible light transmitted through the window.

### **W**

#### *Weather-stripping*

Material used to form a weather-resistant seal around operable sash.

#### *Weep flaps*

A weep hole that is covered with vinyl flap that allows water to escape, while keeping insects out.

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### *Weep Holes*

Small openings designed to allow water to escape that might otherwise accumulate in a window's sill.

### *Weep Slots*

Slots or holes in the sill (bottom) member of the sash frame that provides an outdoor release of infiltrated rainwater.

### *Wet Glazing*

A silicone-based substance used to secure and seal the glass to the sash.

### *Wood blocks*

Pieces of plywood that come in different thickness, depending on the depth of the hook of the frame. They are used to make the window flush with the opening it is filling. They are also used to assist in pre-mulling windows together and give the screw more to bite into when joining the windows.