

Trulite provides quality products for the glazing and construction industry. Our products are designed and manufactured to achieve optimum durability in service. When combined with craftsmanship in installation and sound glazing practices successful projects are achieved. To that end we recommend the following specific items and following the guidelines established by the Glass Association of North America published in the *GANA Glazing Manual*. Since our products may be installed in a variety of systems the installer should always reference the designer and/or framing system manufacturer's instructions for their specific job. Clarification of any conflicting design instructions and these or GANA guidelines are the responsibility of the installer.

The Framing System

Glass products supplied must be adequately supported and cushioned at all times to prevent breakage. The framing system must meet the following:

- Frame deflection limited to $L/175$ or $\frac{3}{4}$ ", whichever is less.
- Torque or rotation limited to 1° . Joint offset shall not exceed $1/32$ ".
- Deflection of sill members restricted to $1/8$ " or no more than 25% of recommended edge coverage.
- The daylight opening (DLO) to be square to $1/8$ ".

Protection of Glass Edges

Protect edges of all glass from damage during storage and installation. Poor storage, damage from other trades or rough handling can cause surface damage or chipping of the edges. This can initiate small fractures which can later run under thermal stress or glazing pressure. Use GANA recommended rolling blocks when pitching / rotating glass. See GANA Glazing Manual for rolling block details.

Glass Support (Blocking and Gaskets)

Setting blocks, adequate to support the full depth of glazing, two per lite, should be located at the quarter points, but no less than the eighth points of the base of the glass. Block height must be adequate to maintain minimum edge clearance. Setting blocks must not restrict water drainage. Blocks should have a Shore A Durometer of 85 ± 5 . Neoprene or silicone setting blocks and gasket material are compatible with Trulite insulating glass. The only exceptions are in all structural silicone glazing and with OPACI-COAT 300® spandrel coatings, where the use of silicone gaskets and blocks are the only recommended materials. Edge blocking is required to prevent lateral movement within the glazing channel. Edge blocks should be located in the upper one third of the vertical dimension with a Shore A durometer of 50 - 70.

Glass products should not be exposed to standing water. The framing system must either preclude the infiltration of water or be designed to freely allow water to drain via a weep system. A minimum of two $3/8$ " weep holes are suggested. Installers must consider the potential of water surface tension to trap and hold water for prolonged periods of time in the confined area of the glazing pocket. Maintain adequate glass clearances and remove any dirt or debris from the glazing channel prior to installation.

Use of Capillary Tubes Capillary tubes are recommended for insulating glass units when shipping to points requiring an elevation change of 3000 feet from point of manufacture to point of installation.

General Glazing Guidelines

Recommended Clearances

For ¼" monolithic glass, maintain the following:

- 1/4" minimum clearances between EDGE of glass and framing;
- 1/8" minimum clearance between FACE of glass framing
- 3/8" minimum glass BITE

For 1" overall thick insulating glass, maintain the following:

- 1/4" minimum clearances between EDGE of glass and framing;
- 3/16" minimum clearance between face of glass framing
- ½" minimum glass bite

For other glass thicknesses and more information on clearances see the *GANA Glazing Manual*.

Compatibility of Sealants

Typically neutral cure silicones are compatible with Trulite insulating glass sealants. Our standard sealant is a 2 part silicone. Silicone is mandated in all structural silicone glazing (SSG) applications. Specific material compatibility testing is available upon request.

Spandrel

Spandrel products must maintain a minimum of 1" clearance between the installed panel and cavity insulation. Insulation must be secured to maintain minimum clearance for the life of the installation. Do not field apply ANY insulation products to the back of a spandrel.

Annealed Glass Concerns

Avoid using annealed glass in areas with heat traps, tight fitting blinds, drapes, or HVAC ducts that blow directly on the glass. These installations usually require heat strengthened glass. Tinted glass, coated glass, or glass with applied films increase the risk of thermal breakage. Applied films are not recommended and void the insulating glass warranty, if applicable.

Installation of Glass:

1. Temperature conditions during glazing must be within the limits required by the sealant and gasket manufacturer(s).
2. Measure glass for proper dimensions.
3. Always use a rolling block to rotate glass. See recommendations above.
4. Avoid glass to metal contact with the framing during installation. This can cause edge damage to the glass. Pocket, or "Flush Glazing", is particularly susceptible to glass edge damage from impacting the frame and requires precise sizing of the glass and extra care during installation.
5. Always use suction cups to shift a lite of glass within the opening. Raising or drifting the glass with a pry bar can cause edge damage.
6. Glass with questionable edge conditions should be set aside for inspection by the glass manufacturer or fabricator.

General Glazing Guidelines

Glass Cleaning:

After installation, the glass should be properly cleaned. This may or may not be within the scope of the glazier. Regardless, following proper cleaning instructions at any point after installation are very important. Improper cleaning of any glass may result in damage. In addition, heat-treated (i.e. heat-strengthened and fully tempered) glass is more susceptible to damage from certain cleaning methods. This is especially true regarding the use of metal scrapers and razor blades. These are not recommended for normal cleaning and should only be used with extreme caution. For more complete information on proper cleaning procedures see Trulite Technical Bulletin GG-004, and the Glass Association of North America bulletins GANA 01-0300 *Proper Procedures For Cleaning Architectural Glass* and GANA Bulletin TD-02-0242 *Heat Treated Glass Surfaces are Different*.

Referenced Documents

- *GANA Glazing Manual*, 50th Anniversary Edition
- GANA Bulletin 01- 0300, *Proper Procedures For Cleaning Architectural Glass*
- GANA Bulletin TD-02-0242, *Heat Treated Glass Surfaces are Different*
- Trulite Technical Bulletin GG-004, *Cleaning Instructions—Glass*
- Trulite Technical Bulletin HT-004, *Re-Print of GANA Bulletin TD 02-0402*
- Trulite Technical Bulletin GG-005, *Re-Print of GANA GIB 01-0300*

The documents can be found at the following web sites:

Glass Association of North America: www.glasswebsite.com

Trulite Glass & Aluminum Solutions: www.trulite.com