



## CLEANING OF GLASS

Glass products can be permanently damaged if infrequently or improperly cleaned and we recommend that our glass products be cleaned in strict compliance with industry procedures. We recommend reading and following guidance on cleaning found in GANA 01-0116 Proper Procedures for Cleaning Architectural Glass and GANA TD-02-0402 Heat Resistant Surfaces are Different.

Surface damage can be more noticeable on reflective, tinted and coated glass and damage may not be noticed in certain lighting conditions. Scratches that are not easily seen with a dark or gray sky may be very noticeable when the sun is at a certain angle in the sky. For this reason, we strongly recommend that window cleaners test-clean a small area of one window, then stop and examine the surface carefully for any damage to the glass and/or any exposed coating.

Heat-treated glass is used in most architectural glass products today for a variety of strength and safety reasons and it is important to understand the unique characteristics of heat strengthened and fully tempered glass prior to cleaning. A majority of the heat-treated glass produced over the past 30 years has been fabricated in horizontal roller hearth furnaces where annealed float glass is seamed, washed, and then transported on horizontal rollers through an oven and heated to approximately 1150°F. Upon exiting the furnace, the glass is rapidly cooled by blowing air onto both surfaces simultaneously. As the very hot glass is transported inside and out of the furnace on horizontal rollers the soft glass-to-roller contact allows minute glass particles (fines) transported on the glass to adhere to both surfaces of the glass. If the particles adhere to equipment rollers it can result in a marking or dimpling on the soft glass surface. In addition to glass fines, other sources for the marking may include plant air-borne debris, refractory particles from the heat-treating equipment, and dirt and grit carried into the plant by the large volumes of quench air used in the process. These surface conditions do not threaten the visual nor structural integrity of the product and are not reason for rejection of glass under the ASTM standard (ASTM C1048-12 ¶ 7.5). These embedded or attached particles change the smoothness of the glass surface and an attempt to remove them with a blade or sharp instrument may permanently damage the glass.

In addition, other construction material and debris may be deposited on the glass. Paint, stucco, concrete, sealants, adhesives, and or other materials may be on the glass and left for long periods of time. These materials and the methods for removing them may also damage the glass surface.

It is important to note that the recommended cleaning procedures for heat-treated glass are the same as for annealed glass. The use of scrapers, abrasives, and harsh chemical cleaning agents is not recommended for any glass product because they can cause irreparable damage. Please refer to GANA 01-0116 for a list of “do’s and don’ts” for glass cleaning.

For further reading we recommend technical documents on Vitro Architectural Glass’ website:

- <https://www.vitroglazings.com/media/ycnpjcpn/vitro-td-142.pdf>
- <https://www.vitroglazings.com/media/12ajakrw/vitro-td-107.pdf>