

TECHNICAL BULLETIN
Glass Cleaning Guidelines

Since glass can be permanently damaged from improper cleaning techniques it is strongly recommended that the following guidelines be strictly followed for successful results.

Begin by soaking the glass surface with a mixture of clean water and a mild, non-abrasive commercial window cleaning solution. The mixture should be applied to the glass surface with a brush, strip washer, or other suitable, non-abrasive applicator. If there is excessive dirt and grime on the glass rinse with clean water before applying cleaning solution. Frequently examine the applicator to make sure it remains free of any abrasive debris that might scratch the surface of the glass. A squeegee should be used immediately following the glass soaking to removed all of the cleaning solution. Throughout the cleaning process care should be exercised in making sure that no metal parts of the cleaning tools come in contact with the glass and that the tools are cleaned often to prevent them from picking up abrasive debris from the glass surface and trapping it between the tool and glass surface, thus scratching the glass. Any cleaning fluids that remain on the surrounding framing, sealants and gaskets should be dried to prevent their possible deterioration. It is recommended, especially if the glass surface being cleaned is a coated surface (reflective or otherwise), to wash one window only and then stop to closely examine the surface for any scratches or damage that might be caused by the cleaning equipment.

A common cause of scratches during jobsite window and glass cleaning is the use of large scrapers or razor blades over a large surface area. This is not recommended. When materials cannot be easily removed from the glass surface through the cleaning process above, the use of a new 1” razor blade may be employed. This should be used on a small area only, and scraping should be in one direction. Never scrape back and forth as abrasive particles may become trapped under the blade and scratch the glass. This can cause hairline scratches that become noticeable under certain lighting conditions.

Heat treating architectural glass, to produce either fully tempered or heat-strengthened glass, is a process in which the glass is uniformly heated in a furnace to a temperature at which the glass become slightly plastic (approx. 1150° F). In a horizontal tempering oven the glass travels continuously across ceramic rollers. The contact between the softened glass surface and the hot oven rollers can result in slight abrasions and dimpling of the glass surface. In addition, in a glass fabrication plant environment there exists microscopic airborne particles of glass, dust, grit, and oven insulation material which may adhere to the glass surface as a result of the softening of the glass in the heating process. Though these characteristics are generally invisible, have no effect on the visual or structural quality of the glass, and are permitted by the ASTM Specifications for glass quality, they may be detectable to the touch. It is this “feel” that may cause some glass cleaning personnel to use scrapers or razor blades. This practice is not recommended because it can lead to widespread scratching and even surface chipping. The glass cleaning procedure for heat-treated glass is the same as for annealed glass.

For further information on industry cleaning procedures visit the Glass Association of North America’s (GANA) website at www.glasswebsite.com. See the following Quick Reference guidelines as recommended by GANA.

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GANAs Quick Reference Guideline to Cleaning Architectural Glass

DO:

- Clean glass when dirt and residue appear
- Determine if coated glass surfaces are exposed
- Exercise special care when cleaning coated glass surfaces
- Avoid cleaning tinted and coated glass surfaces in direct sunlight
- Start cleaning at the top of the building and continue to lower levels
- Soak the glass surface with clean water and soap solution to loosen dirt and debris
- Use a mild, non-abrasive commercial window cleaning solution
- Use a squeegee to remove all of the cleaning solution
- Dry all cleaning solution from window gasket, sealant, and frames
- Clean one small window and check to see if procedures have caused any damage
- Caution other trades against allowing other materials to contact the glass
- Watch for, and prevent conditions that can damage the glass

DO NOT:

- . . . use scrapers of any size or type for cleaning glass
- . . . allow dirt and residue to remain on glass for an extended period of time
- . . . begin cleaning glass without knowing if coated surface is exposed
- . . . clean tinted or coated glass in direct sunlight
- . . . allow water or cleaning residue to remain on the glass or adjacent materials
- . . . begin cleaning without rinsing excessive dirt and debris
- . . . use abrasive cleaning solutions or materials
- . . . allow metal parts of cleaning equipment to contact glass
- . . . trap abrasive particles between the cleaning materials and the glass surface
- . . . allow other trades to lean tools or materials against glass surface
- . . . allow splashed materials to dry on the glass surface