

WINTECH

AN EMPLOYEE OWNED COMPANY

Commercial Windows

*Window Technologies, Inc.
201 Industrial Dr.
Monett, MO 65708
P: 800-365-4924
F: 417-737-7140*

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Glass Care and Maintenance

1. General Overview and Contact

WinTech Windows are tested, manufactured, and supplied in accordance with AAMA standards, specifications, and requirements; however WinTech cannot protect against adverse environmental conditions, extreme or unusual use of the products provided in the field. The information contained in this manual has been compiled for general and typical window types. WinTech cannot warrant or guarantee products that are used in any manner other than normal use and results may differ from those expressed in this manual. Due to custom applications, design, and specifications of this industry some of the information may not apply and should be analyzed and reviewed before action is taken. Users of material should conduct their own tests to verify that material is applicable for the field application.

In the event that a part or piece has broken or become defective please send requests for information or possible replacement to:

WinTech Replacement Department

WinTech P.O. Box 201 Monett, MO 65708

Or Call

P: 800-365-4924

F: 417-737-7140

Or Visit

www.wintechinc.com

Glass Care and Maintenance

1.1 General Cleaning

Glass should be washed, rinsed and dried during the different phases of construction. This will help prevent the accumulation of foreign debris to adhere and distort glass from its original quality. For most glass except specialty or coated glass, use mild soap, clean with soft and particle free cloths, or sponges. Use of a slightly acidic cleaning solution can be used on glass, but immediate rinsing with clean water must be completed. Use of a rubber squeegee for streak free viewing is acceptable. Check with project glass manufacturer for specific cleaning instructions.



Glass Informational Bulletin

GANNA 01-0300

Proper Procedures for Cleaning Architectural Glass Products

Architectural glass products play a major role in the comfort of living and working environment of today's homes and commercial office spaces. By providing natural daylight, views of the surroundings, thermal comfort and design aesthetics, glass usage and condition often affect our selection of where we live, work, shop, play and seek education.

Architectural glass products must be properly cleaned during construction activities and as a part of routine maintenance in order to maintain visual and aesthetic clarity. Since glass products can be permanently damaged if improperly cleaned, glass producers and fabricators recommend strict compliance with the following procedures for properly cleaning glass surfaces.

As dirt and residue appear, interior and exterior glass surfaces should be thoroughly cleaned. Concrete or mortar slurry which runs down (or is splashed on) glass can be especially damaging and should be washed off as soon as possible. Before proceeding with cleaning, determine whether the glass is clear, tinted or reflective. Surface damage is more noticeable on reflective glass as compared with the other glass products. If the reflective surface is exposed, either on the exterior or interior, special care must be taken when cleaning, as scratches to the reflective glass surface can result in coating removal and a visible change in light transmittance. Cleaning tinted and reflective glass surfaces in direct sunlight should be avoided, as the surface temperature may be excessively hot for optimum cleaning. Cleaning should begin at the top of the building and continue to the lower levels to reduce the risk of leaving residue and cleaning solutions on glass at the lower levels. Cleaning procedures should also ensure that the wind is not blowing the cleaning solution and residue onto already cleaned glass.

Cleaning during construction activities should begin with soaking the glass surfaces with clean water and soap solution to loosen dirt or debris. Using a mild, non-abrasive commercial window washing solution, uniformly apply the solution to the glass surfaces with a brush, strip washer or other non-abrasive applicator. Immediately following the application of the cleaning solution, a squeegee should be used to remove all of the cleaning solution from the glass surface. Care should be taken to ensure that no metal parts of the cleaning equipment touch the glass surface and that no abrasive particles are trapped between the glass and the cleaning materials. All water and cleaning solution residue should be dried from window gaskets, sealants and frames to avoid the potential for deterioration of these materials as the result of the cleaning process.

It is strongly recommended that window washers clean a small area or one window, then stop and examine the surface for any damage to the glass and/or reflective coating. The ability to detect certain surface damage, i.e. light scratches, may vary greatly with the lighting conditions. Direct sunlight is needed to properly evaluate a glass surface for damage. 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 or when the sun is low in the sky.

2945 SW Wanamaker Drive, Suite A Topeka, KS 66614-5321
(785) 271-0208 Fax: (785) 271-0166
www.glasswebsite.com

The glass industry takes extreme care to avoid glass scratches by protecting all glass surfaces during glass manufacturing and fabrication, as well as during all shipping and handling required to deliver the glass to the end user. A large percentage of damaged glass results from non-glass trades working near glass. This will include painters, spacklers, ironworkers, landscapers, carpenters and others who are part of the construction process. They may inadvertently lean tools against the glass, splash materials onto the glass and/or clean the glass incorrectly, any of which can permanently damage glass.

One of the common mistakes made by non-glass trades people, including glass cleaning contractors, is their use of razor blades or other scrapers on a large portion of the glass surface. Using 2, 3, 4, 5 inch and larger blades to scrape a window clean carries a large probability for causing irreparable damage to glass.

The entire industry of glass manufacturers, fabricators, distributors, and installers neither condones nor recommends widespread scraping of glass surfaces with metal blades or knives. Such scraping will often permanently damage or scratch the glass surfaces. When paint or other construction materials cannot be removed with normal cleaning procedures, a new 1" razor blade may need to be used only on non-coated glass surfaces. The razor blade should be used on small spots only. Scraping should be done in one direction only. Never scrape in a back and forth motion as this could trap particles under the blade that could scratch the glass. This practice may cause hairline concentrated scratches, which are not normally visible when looking through the glass, but may be visible under certain lighting conditions.

Jobsite storage and construction conditions can lead to stains on the glass surface. Cleaning and removal of such stains may require the use of a more aggressive cleaning solution and procedure. If conditions are found that cannot be cleaned using the above procedures, contact the glass supplier for guidelines on stain removal.

Members of the Glass Association of North America (GANA) publish information relating to jobsite protection and cleaning of architectural glass products. In order to ensure long-term performance of the glass in a building, GANA encourages glazing contractors, general contractors, building management and owners to be aware of conditions that can damage glass and to follow the handling and cleaning guidelines provided by their glass producer and fabricator.

Consult the GANA website (www.glasswebsite.com) for additional information on glass and glazing applications and links to members providing additional technical resources.

The Glass Association of North America (GANA) has produced this Glass Information Bulletin solely to provide general information as to basic proper procedures for cleaning architectural glass products. The Bulletin does not purport to state that any one particular type of glass cleaning process or procedure should be used in all applications or even in any specific application. The user of this Bulletin has the responsibility to ensure the cleaning instructions from the glass supplier are followed. GANA disclaims any responsibility for any specific results relating to the use of this Bulletin, for any errors or omissions contained in the Bulletin, and for any liability for loss or damage of any kind arising out of the use of this Bulletin.

Quick-Reference Guide to Cleaning Architectural Glass Products

The following "Do's" and "Do Not's" are offered as a supplement to the Glass Association of North America (GANA) Glass Informational Bulletin – *Proper Procedures for Cleaning Architectural Glass Products*:

The following are things to DO:

- DO clean glass when dirt and residue appear
- DO determine if coated glass surfaces are exposed
- DO exercise special care when cleaning coated glass surfaces
- DO avoid cleaning tinted and coated glass surfaces in direct sunlight
- DO start cleaning at the top of the building and continue to lower levels
- DO soak the glass surface with a clean water and soap solution to loosen dirt and debris
- DO use a mild, non-abrasive commercial window cleaning solution
- DO use a squeegee to remove all of the cleaning solution
- DO dry all cleaning solution from window gaskets, sealants and frames
- DO clean one small window and check to see if procedures have caused any damage
- DO be aware of and follow the glass supplier's specific cleaning recommendations
- DO caution other trades against allowing other materials to contact the glass
- DO watch for and prevent conditions that can damage the glass
- DO read the entire GANA bulletin on glass cleaning before starting to clean glass

The following are things to NOT do:

- DO NOT start cleaning without reading the entire GANA bulletin on glass cleaning
- DO NOT use scrapers of any size or type for cleaning glass
- DO NOT allow dirt and residue to remain on glass for an extended period of time
- DO NOT begin cleaning glass without knowing if a coated surface is exposed
- DO NOT clean tinted or coated glass in direct sunlight
- DO NOT allow water or cleaning residue to remain on the glass or adjacent materials
- DO NOT begin cleaning without rinsing excessive dirt and debris
- DO NOT use abrasive cleaning solutions or materials
- DO NOT allow metal parts of cleaning equipment to contact the glass
- DO NOT trap abrasive particles between the cleaning materials and the glass surface
- DO NOT allow other trades to lean tools or materials against the glass surface
- DO NOT allow splashed materials to dry on the glass surface

This bulletin was developed by the GANA Tempering Division - Construction Subcommittee and approved by the Tempering Division - Standards & Engineering Committee and GANA Board of Directors. This is the original version of the document as approved and published in March 2000.

Glass Care and Maintenance

1.3 Care During Installation

Cleaning of glass and windows must be done and monitored during all stages of installation and construction. Upon arrival to the jobsite and installation, windows and glass should be wiped down and cleaned. Cleaning during the construction phase of the glass and windows should be soaked with clean water, then a mild soap solution to loosen any dirt, dust and debris. Use a non-abrasive or cloth brush to apply a non-abrasive cleanser to the glass. Before the cleanser becomes dry, use a squeegee and dry glass. Make sure not to hit, nick, or scratch glass with any metal or sharp object. After drying glass and window frame, a blue max or similar protective film may be applied to protect from new construction debris, dust, paint, welding spatter, or contaminants; provided that these must be tested prior to application to avoid damaging the finish.

Finish Care and General Maintenance

2. Anodized Aluminum Cleaning and Maintenance.

2.1 General Cleaning

Cleaning products for terrazzo, cement, plasters, and many cleaning materials used to clean masonry, and many other materials, are very harmful to anodized and painted finishes and should not be allowed to come in contact with the window system. In the event that any does come in contact, it should be removed immediately with mild soap and water. Start at the top of material and soak the entire location with water and mild soap solution to remove soil and large pieces of debris. Start by wiping with a non-abrasive brush in a horizontal manner and then a vertical (top to bottom) motion. Rinse cleaning materials with clean water and dry with a clean non-abrasive cloth.

2.2 Removal of debris and oils

Cleaning of anodized aluminum surfaces should be in accordance with AAMA 609 & 610-02 "Cleaning and Maintenance Guide for Architecturally finished Aluminum".

ATTENTION Use of duct tape, masking tape, and similar products to painted aluminum surfaces will produce permanent adhesion of tape to the finish. This adhesion will promote adhesion failure of finish to aluminum surface upon removal of the tape. If protective coatings are required, these should be tested prior to application and removed prior to using field applied sealants during installation. Always refer to protective coating manufacturer for compatibility of different finishes.

3. Painted Aluminum Cleaning and Maintenance.

3.1 General Cleaning

Cleaning products for terrazzo, cement, plasters, and many cleaning materials used to clean masonry, and many other materials, are very harmful to anodized and painted finishes and should not be allowed to come in contact with the window system. In the event that any does come in contact, it should be removed immediately with mild soap and water. Start at the top of material and soak the entire location with water and mild soap solution to remove soil and large pieces of debris. Start by wiping with a non-abrasive brush in a horizontal manner and then a vertical (top to bottom) motion. Rinse cleaning materials with clean water and dry with a clean non-abrasive cloth.

3.2 Removal of debris and oils

Cleaning of painted aluminum surfaces should be in accordance with AAMA 609 & 610-02 "Cleaning and Maintenance Guide for Architecturally finished Aluminum".

ATTENTION Use of duct tape, masking tape, and similar products to painted aluminum surfaces will produce permanent adhesion of tape to the finish. This adhesion will promote adhesion failure of finish to aluminum surface upon removal of the tape. If protective coatings are required, these should be tested prior to application and removed prior to using field applied sealants during installation. Always refer to protective coating manufacturer for compatibility of different finishes.

4. Maintenance Schedule for Windows and Sliding Doors.

4.1 Quarterly

- Blow or vacuum out dust, dirt and debris from sliding track and sills of windows.
- Remove any debris within window system as it may cause deficiency in hardware operation.
 - Clean sand or debris from all working mechanisms; hinges, latches, limit stops, rollers, and any specialty parts.
 - Polish external hardware to protect finish. Non-abrasive products can be purchased at most local retailers.

4.2 Annually

- Blow or vacuum out dust, dirt and debris from sliding track and sills of windows.
- Remove any debris within window system as it may cause deficiency in hardware operation.
 - Clean sand or debris from all working mechanisms; hinges, latches, limit stops, rollers, and any specialty parts.
 - Polish external hardware to protect finish. Non-abrasive products can be purchased at most local retailers
 - Check exterior perimeter caulking and interior seals and repair as needed.
 - Adjust hardware to allow for proper engagement, operation, and performance.

4.3 Frequently

- Wash exterior and interior windows and glass per the above mentioned methods. Be aware not to scratch or damage material or glass.
- Blow or vacuum out dust, dirt and debris from sliding track and sills of windows.

5. Glass Quality Guidelines

WinTech Glass Quality Guidelines are based on generally accepted industry standards. Unless prior written documentation is received / in place, WinTech will not be held responsible for meeting a more stringent appearance standard.

PRIMARY VIEWING AREA – Defined as the main view area to within 3” of the edge or the central area is considered to form a square or rectangle defined by the center 80 % of the length and 80 % of the width dimensions centered on a lite of glass. The remaining area is considered

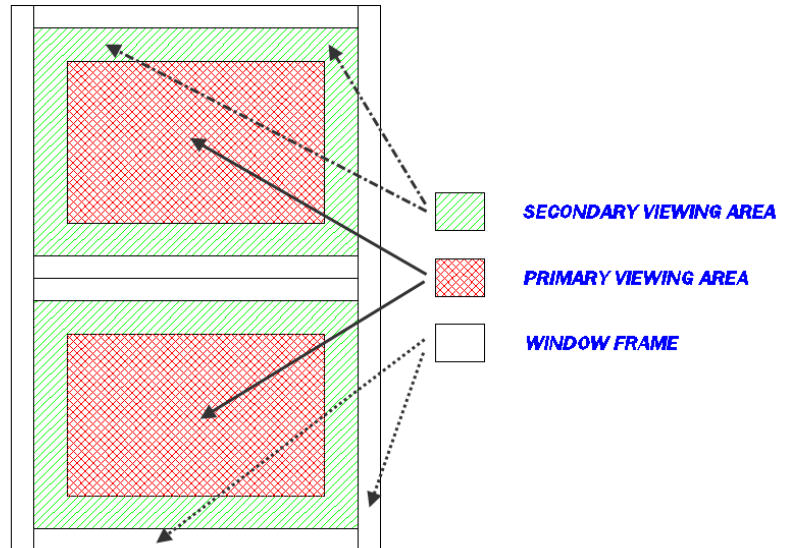
the outer area or secondary viewing area. All listed criteria are based on ASTM C 1376 – 03, specifications for cut size vision glass.

SECONDARY VIEWING AREA – Defined as glass within 3” of the edge all around perimeter of glass to window frame area.

WinTech shall provide monolithic or insulated tempered glass to the glass customer which has no visible flaws that can be easily seen from a distance of 10’ (feet), subject to the following:

* Only flaws visible from 10’ (feet) in the PRIMARY VIEWING AREA apply – reasonable flaws visible from 10’ (feet) in the SECONDARY VIEWING AREA are acceptable.

* The glass is to be viewed under normal exterior or interior lighting conditions. Bright artificial back lighting does not apply.



INSPECTION – An individual is not expected to stare at the glass for great lengths of time and / or from many different angles. WinTech will not be responsible for strain patterns, discoloration, or any non-uniform tint that may result from a tempering process. These conditions are most predominant with bronze or gray tinted products.

In the event a defect or scratch has been observed using a viewing distance of 10’(feet), below is a guide for what is / is not allowed:

What is allowed / acceptable:

- 1) Scratches smaller than 3” in any area.
- 2) Scratches longer than 3” allowed in secondary viewing area only.
- 3) Clustering of small scratches (secondary viewing area only).

What is not allowed / not acceptable:

- 1) Scratches longer than 3” in primary viewing area.
- 2) Clustering of small scratches in primary viewing area.

If upon review from the above guidelines there is a noticed item with glass, contact WinTech immediately before performing any course of action on glass.