



Technical Bulletin

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Manual Washing of Clear and Tinted Glass

Summary

Glass needs to be periodically washed to remove visible dirt, and to prevent accumulations of dirt from bonding to, or attacking, the surface. Glass should be cleaned as frequently as is needed to keep its appearance acceptable. In some locations, and for some building owners, this cleaning will be more frequent than for others.

Glass is very durable when exposed to normal atmospheric conditions, but alkaline solutions, and some acids, can damage it. Cleaning materials from other parts of a building, or leaching and efflorescence from concrete, bricks and mortar, or run-off from oxidizing steel, can be particularly harmful. (Good drip detail in framing design can minimize such run-off concentrations). For this reason it is important to prevent any visible accumulation of deposits from remaining on the glass surface where they can slowly attack it.

Some deposits may not be directly harmful in themselves but by retaining moisture they can cause glass staining and etching. Other deposits may cause damage indirectly simply by being so firmly attached to the glass that it is damaged by the overly aggressive cleaning actions needed to remove the deposits.

When cleaning glass, note that there is usually a layer of abrasive dust resting lightly on the surface. The abrasiveness of this dust can easily scratch the glass if too much pressure is applied with too little cleaning solution.

Proprietary window cleaning liquids, or dishwashing liquid detergents, such as Joy, Ivory or Dawn in low concentrations (10 to 15 drops per 3 to 4 gallons) can be used as cleaning solutions.

Dried paint splashes on glass can be removed with paint solvents, followed by detergent and water washing, taking care that the solvents do not damage glazing materials and the frame. Careful use of the flat edge, not the corner, of a new safety razor blade can be used to remove paint drops from plain,

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non-coated, annealed glass. Razor blades or any metallic scraper should not be used on heat strengthened or fully tempered glass, or coatings on glass, as fine scratches which are only visible in full sunlight can be created.

Recommended Routine Cleaning Products

- Sparkle Glass Cleaner
- Windex® Advanced Glass & Multi-Surface
- Hi-SHEEN
- Windex® Multi-Surface Vinegar Cleaner
- Mixture of one part clear vinegar with one to ten parts clean water.

Commercially available vinegar-based glass cleaners have generally demonstrated an ability to provide a clean, streak-free surface.

Typical Routine Cleaning Procedure:

- Flood the surface with a spray-on cleaning solution or with a cloth saturated with the cleaning solution, to thoroughly wet the surface and remove any grit particles. Be generous with the amount of solution applied.
- Rub the wetted surface with a clean, lint free towel or cloth, to fully dissolve any dirt on the glass surface.
- Wipe dry with a dry, clean, lint free towel squeegee. Do not allow metal squeegee holders to touch the glass surface.
- To prevent streaking, stop wiping when the glass is almost dry and there is still a uniform, thin film of moisture left on the glass surface. This film will quickly evaporate leaving a clean surface. Note: streaking is simply the re-deposition of smears of non-uniform dirt, and detergent from the cleaning solution if there was too much dirt and too little volume of cleaning or rinsing solution.

Detailed Cleaning Procedure to Remove Large Amounts of Dirt:

- If the glass surface is heavily contaminated with dirt, such as during installation on a construction site, use a water spray from a hose or garden spray pressure bottle to flush away insoluble particulate matter without risk of creating fine scratches.
- Flood the surface with a spray-on cleaning solution or with a cloth saturated with the cleaning solution. Be generous with the amount of solution applied.
- Rub the wetted surface with a clean, lint free towel or cloth, to fully dissolve any dirt on the glass surface.
- Wipe dry with a dry, clean, lint free towel or squeegee. To prevent streaking - stop wiping when the glass is almost dry and there is still a uniform thin film of moisture

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left on the glass surface. This film will quickly evaporate leaving a clean surface. Note: streaking is simply the re-deposition of smears of non-uniform dirt and detergent from the cleaning solution if there was too much dirt and too little volume of cleaning solution.

- If, after the above procedure, and under critical viewing, the glass does not appear clean then a rinse with distilled water should be made after detergent washing - before the cleaning solution has had time to evaporate - to remove the dirt contaminated detergent solution. When properly done this allows the final evaporation of a thin film of pure, clean rinse water which cannot leave any visible deposits.

Spot Cleaning

Occasional spot cleaning may be required to remove stubborn dirt or foreign materials that have adhered to the glass surface. Spot cleaning products containing organic solvents, or a one-time gentle hand application of very fine abrasives, can be used to remove markings from grease, oil, tape adhesive, and crayons or other waxy materials as well as paint and rub-off marks from plastics.

Recommended Spot Cleaning Products:

- Soft Scrub® with Bleach Cleanser: Contains Calcium Carbonate and Sodium Hypochlorite.
- Bar Keepers Friend Liquid®: Contains Oxalic Acid and fine abrasive powder.
- Goof-Off: Contains Xylene and Ethyl Benzene.
- Lime-A-Way: Contains Sulfamic Acid, Isopropyl Alcohol and Hydroxyacetic Acid.
- Denatured Alcohol, Methyl Ethyl Ketone, Acetone or other organic solvents available from hardware stores.

Spot Cleaning Procedure:

- Use a cloth saturated with a routine cleaning solution to thoroughly wet the surface and to remove any grit particles.
- Apply a small quantity of one of the cleaners listed above to a clean, wet cloth or towel.
- Rub on areas of glass needing spot cleaning.
- Take particular care to prevent solvents, such as those listed above, from contacting glass sealants, framing and adjacent paintwork.
- Wipe clean using a dry, clean, lint free towel or cloth and immediately follow with the rinsing procedure given above in "Detailed Cleaning Procedure".

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Summary	Date
Original	01/13
Update to Routine Cleaning and Inclusion of Spot Cleaning Section	04/25

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