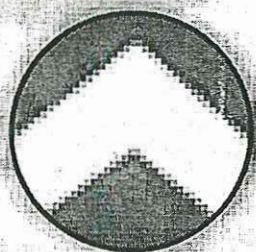


Frame Cleaning

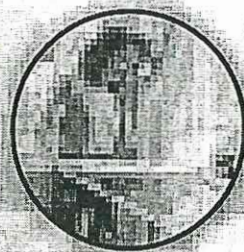


Keeping your windows and doors clean means more than just the glass. Here are some helpful tips for cleaning your window and door frames effectively without damaging them.

- Vacuum dirt from sill and track areas before washing.
- Clean window and door frames with a mixture of mild dish soap* and water.
- Abrasive or caustic cleaners or solvents are never recommended because they might cause permanent damage to the frame finish.
- Mild, nonabrasive soaps* are usually safest for most dirt and stain removal.
- Always rinse completely with clear water and wipe dry.
- Check to make certain that drainage or "weep" holes are always clear of dirt or obstructions—both inside and outside the window or door in the bottom of the frame. *Note:* If the window is "stacked," there may be weep holes between units.

*Ivory® is an example of a mild dish soap. Always test cleaners in an inconspicuous area first.

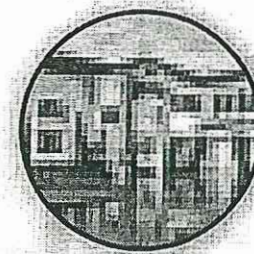
Glass Care



Glass care today is more important than ever. Insulating, low-e or heat reflective glass requires proper maintenance to ensure their complete effectiveness.

- Never use any petroleum-based cleaners, or caustic chemicals on your glass.
- Never use a razor blade, putty knife or abrasive pad to clean the glass.
- Do not use a high-pressure spray nozzle when rinsing your windows after washing.
- All of these practices may damage the glass surface, the insulating glass seal, or component parts.
- Clean glass with a mixture of mild dish soap* and water. Rinse completely with clear water, then wipe dry with a soft cloth to avoid water spots.
- Avoid washing glass in direct sunlight.
- Abrasive or caustic cleaners are never recommended because they might cause permanent damage to the finish or the glass.
- Clean screens by first removing, then washing on a flat, clean surface with mild soap and water and a soft brush. Rinse, wipe dry and reinstall.

Frame Color

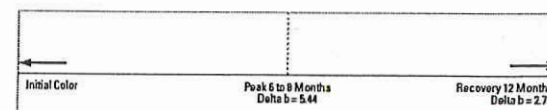


Vinyl frames or vinyl cladding may be affected by solar radiation or chemicals that can cause color change. The chart below shows color change when exposed to the Arizona environment.

Frame Color Change

- Chemicals can cause PVC discoloration. All fuels, solvents, bleaches or corrosive chemicals must be avoided.
- In dry climates with high levels of solar energy, a color change can be expected with PVC, like most any finish.
- A color change has no effect on the strength or structural integrity of the PVC.
- Over time and with exposure to normal humidity, this yellowing most often returns to a white color.

The chart below shows the evolution through the change process with a return to the whiter color after continuing exposure.

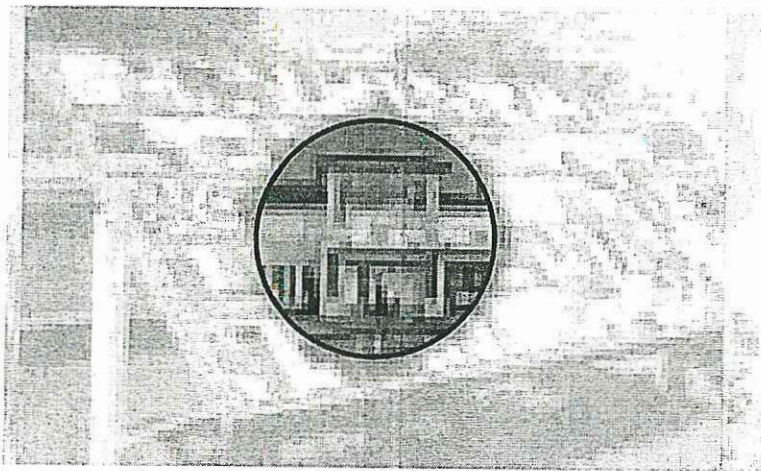


This chart shows actual color change on PVC window frame material when exposed in Arizona. Color can yellow after initial exposure in dry, high-solar-energy climates, then normally whitens again with time and weather. See Notes 1, 2, 4 below.

NOTES:

1. Pricing process can vary. Colors shown are best approximations of actual laboratory samples. Use in shaded outdoor lighting conditions.
2. Reproduced from actual window sample exposed for 1 year at an independent laboratory in New River, AZ. Color development and recovery depends on environmental factors, time of year, and initial pigment.
3. ASTM Standard and AIAA Specification (inside/outside joint) is visually demonstrated as display could be shown as an independent laboratory verification, actual window sample, and reproduction techniques.
4. Color hue and time frame in actual field situations may vary from these examples.

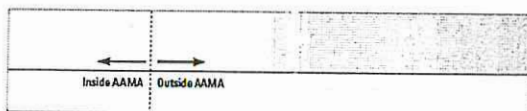
Color Retention Standard



Aging and weathering factors can affect the color of all window frame and hardware materials. AAMA has established an industry color standard for what is and isn't acceptable.

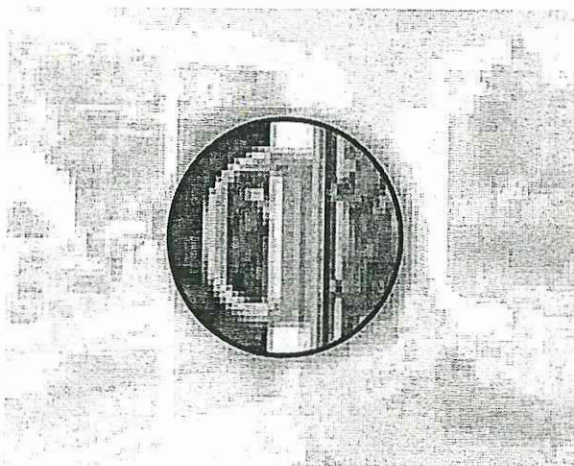
AAMA/Industry Color Standard

- Some degree of color change is built in to industry standards.
- Color change tolerances are covered by AAMA standards for painted aluminum, pvc and other finishes.
- These standards take into account natural aging and weathering factors and describe the allowable change in ways that can be scientifically measured.
- As an example, in the chart below, the potential color change along one spectrum shows the point at which the AAMA standard for white PVC is set.
- PVC that passes the AAMA standard for window profiles meets this color change standard.



This chart demonstrates the American Society for Testing and Materials standard (ASTM D4726-02) incorporated in the AAMA specification for white PVC window frame acceptable color change. See Notes 1, 3, 4 under the Frame Color Change panel.

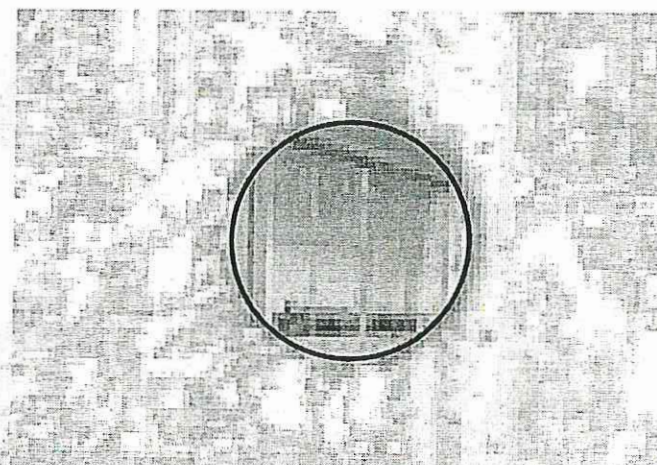
Smooth Operation



To ensure that your windows and doors open, close, lock and unlock easily for years to come, follow these helpful maintenance tips to keep your windows and doors operating smoothly.

- Moving parts in hardware components and tracks and rollers should be lubricated periodically in accordance with the manufacturer's maintenance instructions. In salt-air environments this can mean at least monthly.
- Check weather stripping around operable window and door panels and be sure it seals evenly.
- On sliding doors and windows, make certain track area is kept clean. Vacuum as needed to clear dirt or any debris.
- Adjust sliding door rollers for proper height clearances. Most door rollers can be adjusted with a screwdriver through access holes in either the end or side of the sliding panel at the bottom.
- Rolling screen doors may be adjusted to run smoothly. Use a screwdriver—often in all four corners—to make adjustment.
- After making door roller adjustments it may be necessary to make adjustments in the lock strike placement. Most strikes may be adjusted by loosening screw fasteners, moving strike plate and tightening. Check for proper lock operation.

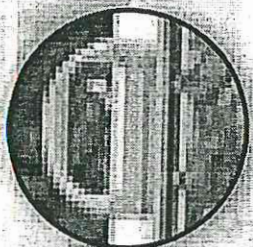
Condensation & Mold



Window condensation can be a natural occurrence. It can be a warning that excessive moisture is present and may cause structural deterioration and the possibility of mold growth.

- Condensation on the inside of a window is a result of a higher air moisture content contacting lower temperatures on the glass. The higher the interior humidity and the lower the outside window temperature, the more condensation can occur.
- Excessive interior humidity can lead to structural damage and health concerns if high moisture levels are sustained inside wall cavities. Wood rot, mold and mildew can result.
- Check all sash for smooth adequate operation. Add integrated window ventilators and air exchange devices if necessary.
- Regularly use exhaust fans especially when showering.
- Install and use a dehumidifier. Use ceiling fans to circulate air.
- Open windows and doors whenever practical or possible to allow interior moisture to escape.

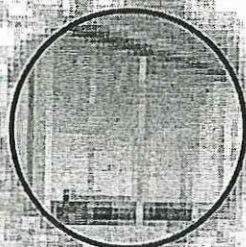
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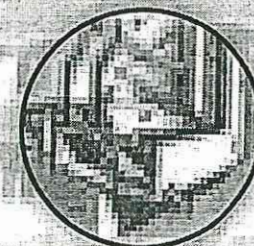
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Drainage Systems



Windows and doors often have a simple drainage system or "weep" system designed right into the product. These water drainage pathways must be kept clear and clean for the window or door to operate correctly.

- It's normal for water to accumulate in the sill or track area with wind driven rain. The water is intended to drain to the outside as water builds up or outside pressure subsides.
- Keep sill or track areas clean of dirt or debris.
- Make sure that outside and inside "weep" holes and sill area are kept clear of any dirt, stucco, sand, or building materials.
- Use a small, soft bottlebrush to clear openings.
- Windows can be vulnerable to water leakage at the corners if not properly maintained. If a crack appears, it should be sealed with a good grade of sealant according to the manufacturer's instructions.