

Pyrolytic Coatings Hand Cleaning Recommendations

Comfort Select 73P and Energy Select 73P are pyrolytically coated (hard coat) low emissivity glasses. The coated surface is very durable and has a slight texture inherent with this type of coated glass. Hand cleaning of pyrolytic coatings is only slightly different than cleaning of non-coated glass. Following the recommendations below will result in successfully cleaning Cardinal's pyrolytic coatings.

Regular Cleaning

- Thoroughly clean the surface of the glass with a clean sponge or soft cloth and tap water to remove surface contaminates.
- Dry with a clean soft cloth. Use a clean sponge or soft cloth to wash the surface with a diluted solution of 10% to 20% vinegar in water. Always use a new soft cloth or a squeegee to dry the glass. Cleaning may cause streaks when dried if the glass is exceptionally dirty. In this case repeat cleaning. Care should be taken with rubber squeegees as they can leave streaks that are extremely hard to remove if they are used incorrectly or are in poor condition.
- Commercial glass cleaners (WINDEX®, GLASS PLUS®, Invisible Glass®, etc.) may be used, but some may leave a film residue and may cause smearing. If these situations occur repeat the cleaning process using a vinegar based cleaner or isopropyl alcohol.

The most important consideration is to remove as much contamination from the coating as possible with the tap water wash before attempting final cleaning.

Special Cleaning

For unusually hard to remove contaminates such as crayons, wax, grease, markers and adhesives, special cleaners may be used to spot clean the glass. Denatured alcohol and isopropyl alcohol work on a variety of contaminates. For harder to remove contaminates such as crayons and markers, commercially available cleaners such as Goo Gone® and Goof Off® work well. After spot cleaning, the full glass surface should be cleaned as discussed above.

Never use **ANY** type of scraper, plastic or metal, on the coated surface.

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Machine Washing Pyrolytic Low Emissivity Coatings and Washer Maintenance

In order to ensure cleaning of Cardinal's pyrolytic coatings, proper maintenance and procedures must be followed.

Daily Maintenance

- Wash water should be changed at least once per shift.
- Wash tank should be drained, vacuumed, and rinsed daily to avoid sludge build up.
- Inspect rolls in rinse and drying sections for contaminates and clean as needed.
- Wipe take off section rolls clean daily.
- Remove any debris from drain screens.

Weekly Maintenance

- Inspect sprocket and chain adjustment.
- Inspect and grease bearings as needed.
- Inspect rolls (especially top pinch rolls in rinse and drying sections) for damage and repair/replace.
- Inspect/clean air knives.
- Inspect pumps.
- Inspect drive belts.
- Inspect water lines for flow.
- Inspect spray tubes.
- Change blower filters.
- Inspect brushes - adjust or replace as needed.
- Inspect control panel, conduit, plugs, receptacles, and heating elements.

- Flush wash and rinse tanks (circulation of a strong detergent in the washer for several hours is desirable).
- Check all rubber and metal curtains for mineral build-up or contact with the top surface of the glass.

Monthly Maintenance

- Steam clean washer a minimum of once per month (pay special attention to areas that can hold water allowing it to stagnate or collect contaminates).
- Steam clean washer a minimum of once per month (pay special attention to areas that can hold water allowing it to stagnate or collect contaminates).
- Clean wash and rinse spray tubes.
- Clean air knife slots (it may be necessary to grind off mineral deposits).
- DO NOT use direct high-pressure spray on brushes as permanent deformation may result.

General Notes

- Wash water temperature should be 130°F to 140°F.
- To reduce scratch potential, a pre-rinse is helpful in removing debris prior to the glass entering the washer.
- Washers should be equipped with low-e brushes. Brush bristles should be 0.008" to 0.010" in diameter and crimped. Brushes should initially be adjusted so bristles are 1/32" below/above the glass surface. Check coating for signs of damage after any adjustment.
- Pinch rolls should make only slight contact with the glass.
- Always run coated side up.
- Use a good detergent (such as Shaklee Basic H, CRL Low-E, Detrex 79 A, or Billco 79A). Normally use less than 50% of the manufacturer's recommendation to minimize the chance of a remaining detergent film.

- Ensure an adequate flow of water to the brushes and rinse (1 GPM per foot of brushes if line speed is 10 FPM or less. More water is needed if line speed is increased or glass requires special cleaning).
- Continuously overflowing the wash and especially the rinse tanks into the overflow pipe is a good practice to help assure clean water.
- When running small lites in a large washer it is good to alternate where the glass is running in the washer to even out brush wear.
- Brushes should be replaced/trimmed when wear makes adjustment difficult, especially in the center.
- Never allow glass to stop in the washer especially under rotating brushes as marking can occur.
- De-ionized water used in the rinse section of your washer will ensure a clean, residue free glass surface. This helps insure good adhesion of insulating sealants to the coated surface.

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4th Surface Comfort Select 73P and Energy Select 73P Special Considerations

The surface of the Pyrolytic coatings is different than uncoated glass. Special considerations are needed to ensure successful use.

Do

- Do use clean gloves when handling pyrolytic coated glass.
- Do use clean suction cups when contacting the coated surface.
- Do use a light evaporating cutting fluid.
- Do process pyrolytic coated glass with the coating up; away from rollers/belts, transfer rolls, tempering rolls, etc.
- Do use recommended cleaning instructions to spot clean contaminants.

Do not

- Do not slide suction cups on coated surface prior to picking up.
- Do not slide lites of pyrolytic coated glass against each other.
- Do not let the coated surface contact dirty tension strings/rods on a harp rack.
- Do not stack the coated surface of adjacent lites against each other.
- Do not get sealant or glazing materials such as silicone, polyurethane, polysulfide, etc. on the coated surface.

- Do not use metal scrappers on the coated surface.

Special Considerations

- For commercial applications utilizing structural glazing, the coating requires a primer which is compatible with the glazing adhesive. Consult the adhesive manufacturer for proper compatibility.
- Glazing tapes containing neoprene or butyl will have some percentage of oil that can migrate onto the glass surface over time. Be aware this oil can migrate onto the coated surface.
- To remove contaminants from the surface after fabrication refer to FG04_11-2023 Pyrolytic Coatings Hand Cleaning Recommendations.
- Avoid placing labels directly on the coating. If placing labels on the coated surface is required to ensure the label may be easily removed without leaving residue. Static cling labels work well.

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