



PILKINGTON

Technical Information

ATS-133
2005-07-15

Machine Cleaning

Pilkington Energy Advantage™ Low-E Glass

Pilkington Solar E™ Solar Control Low-E Glass

Pilkington Eclipse Advantage™ Reflective Low-E Glass

The three products listed above are pyrolytically applied coatings with excellent abrasion resistance and durability. The nature of the outer surface of the Low-E coating makes it clean differently compared to uncoated float glass. Following are guidelines to obtain the best cleaning results in both horizontal and vertical glass washing machines.

1. A list of tested cleaning materials is included in Attachment 1. These can be used for machine washing, hand cleaning, and spot cleaning as required. Note this is not a complete list of all satisfactory materials.
2. The flat glass washer should be properly maintained in a clean state and in good repair. There will be no difficulty in machine washing the Pilkington Low-E glass products using a clean, properly maintained machine with the manufacturers recommended set-up instructions for the given glass thickness. This includes adequate water flow through all nozzles, using recommended detergent, water temperatures, proper brush height and rotation direction, and clean air knives and filters.
3. For best results, run the Low-E surface facing up, away from the glass support rolls. This will minimize any unnecessary contact with the Low-E coating. The coated surface is very hard and has a very fine texture which can abrade rubber or metal materials dragged across it leaving a deposit which would need spot cleaning.
4. The use of the washer manufacturers recommended glass cleaning detergent is preferred, however, suitable alternatives are listed below.
5. Ammonia-base and alcohol-base products are not recommended for spot cleaning by hand. These products tend to leave streaks on the coated glass surface when dried.
6. Do not use a razor blade, steel wool or other metallic objects to remove stubborn deposits. Razor blades leave metal particles on the coating that appear as scratches. Use one of the supplies listed in Attachment 1 to remove such deposits.
7. Lint free towels (paper or cloth) are recommended for touch-up drying.

If there is any question about the suitability of any type of cleaner, please contact the Architectural Technical Services Department of Pilkington North America, Inc. at: 419 247 4448.

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Suitable Glass Cleaners for PNA Low-E Coated GLASS

<u>CLEANER</u>	<u>AVAILABLE FROM</u>	<u>USED FOR</u>
<u>MILD ABRASIVES:</u>		
"Sparkle" Cleaner & Stain Remover No. SP101	C. R. Laurence 800-421-6144	Manual spot cleaning
Soft Scrub	Grocery Store	Manual spot cleaning
Bar Keepers Friend	Grocery Store	Manual spot cleaning
<u>SOLVENTS:</u>		
Ace tone	Hardware Store	Organic Marking
Isopropyl Alcohol	Hardware Store	Organic Marking
<u>ACID:</u>		
Muriatic Acid (20% HCl)	Hardware Store	Metal Marking
"Acid Magic™" Muriatic acid replacement (Buffered HCl Acid)	Certol Int. LLC Commerce City, CO tel. 800 843 3343	Metal Marking
<u>OTHER:</u>		
Steel Glo Stainless Steel and Copper Bottom Cleaner	Grocery Store	Metal Marking
<u>GENERAL GLASS CLEANERS:</u>		
Basic H	Shaklee Products (419) 661-0707	Machine Washing
Billco 79A Detrex 79A	Billco Mfg. (412) 452-7390	Machine Washing
Alconox, Alcojet	Fisher Scientific (412) 562-8300	Machine Washing
Sparkle Glass Cleaner, A.J. Funk Co., IL	Grocery Store	Hand Washing
Windex with Vinegar	Grocery Store	Hand Washing
50/50 Mixture Vinegar & Water	Grocery Store	Hand Washing

The information contained in this bulletin is offered for assistance in the application of Pilkington flat

glass products, but **IT DOES NOT CONSTITUTE A WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.** Actual performance may vary in particular applications.