



## CLEANING GUIDELINES FOR LOW E HARD COATED GLASS

Low E glass is an energy efficient product that has a very thin coating applied to one surface during its manufacture. National Glass only supplies “hard coated” Low E glass, i.e. the coating is what is referred to as a *pyrolytic* coating. This is a thin coating which is chemically bonded to the glass surface while it is still in a semi-molten state, which reacts to form a hard, durable ceramic coating. This coating provides improved control of thermal insulation over ordinary float glass.

The coated surface, always glazed to the inside of the building (except in Insulated Glass Units where it is on the inner pane but **facing** outside), requires a slightly different cleaning procedure to that needed for ordinary, uncoated float glass.

The following recommended guidelines provide the best results when cleaning this coated surface. Any preferred cleaning method for float glass is acceptable for the uncoated surface.

### Precautions & Warnings

- DO NOT use abrasive, powder-based, ammonia-based, or alcohol-based cleaning solutions.
- DO NOT use cleaners that contain any harsh acid or alkali (hydrochloric acid is the exception to this, under certain circumstances only, and is covered under “Specialised Cleaning” further down).
- DO NOT clean glass when it is hot, or in direct sunlight.
- DO NOT use hot water on cold glass, or cold water on hot glass.
- DO NOT use power washers or garden hoses to clean windows and doors.
- DO NOT allow cleaning solution to contact the edges of any laminated glass.
- DO NOT allow cleaning fluid to dry on glass, or surrounding surfaces.
- DO NOT use squeegees, razor blades, scrapers, scourers, and metal or abrasive products.

### 1. ROUTINE HAND CLEANING

This procedure should be followed as required, to remove accumulated dust and fingerprints.

#### Recommended Cleaning Products

- Clean water.
- Clean lukewarm soapy water.
- Solution of one part vinegar to ten parts clean water.
- Commercially available vinegar based cleaners.
- Commercial domestic glass cleaners such as Mr Muscle® Window & Surface Cleaner.
- Clean, lint-free soft cloth.





## Recommended Hand Cleaning Procedure

- Always start cleaning at the top of the window or door and work your way down.
- Flush with generous amounts of clean water to remove dirt and particles.
- Spray with soapy water (and/or vinegar solution for more stubborn marks).
- Remove all traces of cleaning solution by rinsing with clean water.
- Remove the excess water with a cloth. To prevent streaking, do not dry completely but leave a thin film of moisture on the glass. This film will quickly evaporate, leaving a clean surface.
- Repeat the process if necessary.

**NOTE:** DO NOT wipe with a dry cloth, or when the surface is dry.

## 2. SPOT CLEANING

This refers to individual spots or areas of stubborn dirt and foreign materials, such as grease, oil, tape adhesive, paint and even crayons. Regular glass cleaning solutions, as described for routine hand cleaning, may not remove these. We recommend as below. First carry out the Routine Hand Cleaning Procedure in order to remove all normal, less stubborn organic deposits.

### Recommended Spot Cleaning Products

- Acetone.
- Denatured alcohol.
- Mineral Turpentine.
- Clean, lint-free soft cloth.

### Recommended Spot Cleaning Procedure

- Observe all of the chemical manufacturer's handling and safety instructions.
- Apply a small amount of the cleaner to a clean WET cloth.
- Rub gently on the area requiring spot cleaning, taking care not to allow the cleaner to come in contact with any surrounding frame, surface or paintwork which may be damaged or marked by these solvents.
- Wipe clean with a WET cloth.
- Follow this with the Recommended Hand Cleaning Procedure.

**NOTE:** DO NOT wipe with a dry cloth, or when the surface is dry.





### **3. SPECIALISED CLEANING**

While metal, or abrasive objects, such as blades, scrapers or steel wool should never be used to clean ANY glass surface, it is especially important when cleaning Low E glass. The Low E coating is hard enough that any metal object coming in contact with it, may lose a tiny amount of metal, which may then be deposited on the coated surface. This may then appear as a “stain” or “scratch”. These cannot be removed by routine hand or spot cleaning. For the removal of such metal marks, it will be necessary to use a hydrochloric acid based product or solution. First carry out the Routine Hand Cleaning Procedure in order to remove all normal organic deposits.

#### **Recommended Specialised Cleaning Products**

- Solution of 10% Dilute Hydrochloric Acid (such as typical pool acid) to 90% clean water. SEE PROCEDURE BEFORE MIXING!
- Clean, lint-free soft cloth.

#### **Recommended Specialised Cleaning Procedure**

- Observe all of the chemical manufacturer’s handling, safety and disposal instructions.
- It is advisable to wear protective gloves and eyewear, and take extreme care not to spill any acid or solution on clothes, skin, or surfaces. Even the diluted solution may be corrosive to any organic matter.
- NEVER ADD WATER TO ACID, ALWAYS ADD ACID TO WATER. Adding the water to the acid could cause it to react violently and splutter, causing injury, burns, or damage to sundry surfaces. Pour the water into a container first, and then carefully stir the acid into the water, in the proportions indicated.
- Apply a small amount of the prepared solution to a clean WET cloth.
- Rub gently, only on the area requiring spot cleaning, taking care not to allow the cleaner to come in contact with any surrounding frame, surface or paintwork.
- Wipe clean with a WET cloth.
- Follow this with the Recommended Hand Cleaning Procedure.

**NOTE:** DO NOT wipe with a dry cloth, or when the surface is dry.

#### **DISCLAIMER**

This brochure is issued as a general guide only, and does not preclude the use of other methods, materials or equipment. However, the user should carefully evaluate and fully investigate the suitability of any alternative methods, materials, or equipment before using them. Specific advice or more explicit cleaning instructions should be obtained from a reputable professional window cleaner or the glass manufacturer. National Glass Distribution disclaims liability from any loss or damage suffered from the provision or use of this information.

