



## **Cleaning and Maintenance Guidelines for LLumar® and Vista® Window Films**

The following is the guide to cleaning and maintenance of LLumar® and Vista® window films. These are guidelines only; specific requests about the use of particular cleaning materials, cleaning products, etc., should be referred to Marketing Technical Services (MTS). If additional information is needed, please contact MTS.

Most LLumar® and Vista® films are specifically designed with a highly durable scratch resistant coating (SR for interior grade films, ER for exterior grade films). Films that are designed without a scratch resistant coating must be cleaned more carefully than scratch resistant films. The SR and ER coatings provide excellent resistance against both scratching and abrasion. With reasonable care these coatings will last for many years, keeping the film looking fresh and clean. These guidelines will assist you in maintaining the excellent visual and performance properties of LLumar® and Vista® films.

### **Scope**

These guidelines apply to all LLumar and Vista films, including EnerLogic low E films and Helios exterior grade films.

### **General Notes**

- a) Wait for thirty (30) days after installation before cleaning the film. It may be necessary to wait longer than this if local environmental conditions result in longer cure time, especially for safety / security films.
- b) It is recommended that cleaning is done when sunlight is not incident on the glazing, whether or not film is installed, especially for hotter climates and hotter times of the year. Using cold water on hot windows can cause thermal stress breakage of glass in some circumstances.
- c) It is recommended that cleaning be carried out regularly, preferably on a quarterly or half-yearly basis. Extra care must be used with non-scratch resistant films such as RR20 HPR (see below).
- d) Water used in cleaning and maintenance must be clean and free from contamination of any kind. Tap water is often acceptable quality, but where local tap water cannot be guaranteed to be correct quality, clean, distilled water should be used.
- e) Use clean, warm, soapy water to remove the dirt and clean, warm, non-soapy water to wash the soap off. Always prepare the soap solution for cleaning on the day it is to be used; some liquid soaps can precipitate out of solution and create particles if the night-time temperature cools sufficiently.
- f) The soap (surfactant) solution is to be a neutral, water based, liquid concentrate, diluted in water. Do **NOT** use the concentrate 'as is' – dilute to an appropriate concentrate with clean water. Liquid washing-up concentrates are often suitable for this purpose.
- g) Do **NOT** use any abrasive materials, products or cleaning equipment, e.g. nylon scrubbing pads, abrasive cloths, etc.
- h) All equipment and materials used must be kept clean and in good condition, without defects, and must be correctly maintained and stored. Do not place equipment on dirty surfaces during the cleaning routine; contamination might result and damage the film.
- i) Do **NOT** use any ammonia or silicone based products, or any strong acids/alkalis, or any phenols, cresols or chlorinated phenols, or other non-approved solvents or cleaning materials. Contact Marketing Technical Services for further information.

### **Cleaning Guidelines**

1. Spray the film surface with clean, warm soapy water. The water temperature should be warm, typically 25-30 °C, not hand hot (35-40 °C).
2. Gently wipe the wet film surface to loosen the dirt, taking care not to damage the film. A soft, clean non-abrasive foam pad (or similar) is often suitable.
3. Spray the film surface again with warm non-soapy clean water and wash the dirty water away.



4. Use a soft rubber, window-cleaner's type squeegee, kept in good, undamaged and clean condition, to squeegee the film dry. Start from the top of the panel and work downwards to remove surface water. Any small amount of residual water left behind on the film surface will naturally evaporate away.
5. Ensure that the film edges and corners are not damaged during cleaning – run the length of the squeegee blade along the film edges, not across the edges.
6. Do not clean the window at the hottest time of the day or when the water could cause the glass to break from thermal stress (hot glass with cooler water = temperature difference = thermal stress). It is often best to clean in the morning at the beginning of the working day.
7. For non scratch resistant films adapt the above procedure, for example:
  - a. Do not use abrasive materials and / or equipment
  - b. All equipment must be clean and well maintained
  - c. Hose the window down with warm soapy water, then hose off with clean water. Do not rub the surface of the film.
  - d. If using a pressurised spray do not use high pressure – medium to low pressure is acceptable.
  - e. Allow the film to dry naturally.

#### **Maintenance Guidelines**

1. Do not attempt to remove the film from the glass; this must only be done by professionally trained personnel.
2. Do not pick the corners or edges of the film, even to check that the film is adhering to the glass correctly.
3. Professional window cleaners often do not know what film is and how to maintain it correctly; the window cleaner must not use equipment and / or materials that cause the film to peel from the glass. Repeated incorrect cleaning can pull the film edge from the glass. Ensure the window cleaner has a copy of these instructions before the windows are cleaned.
4. Do not apply any tape, film, sticker, suction pad, paint, pen marks, or other material onto the film surface unless recommended by Marketing Technical Services.
5. The scratch resistant coating is extremely durable. It will keep windows looking clear and in good condition for many years, providing that the required care and cleaning are performed correctly.