



VEHICLE  
VINYL WRAP  
INSTALLATION GUIDE



## VIKING INSTALLATION GUIDE

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## **1. RECOMMENDATIONS**

- Viking films adheres particularly well on steel, aluminum, glass, melamine, and PVC.
- Viking films has less adhesion on these substrates: low energy surfaces (polypropylene and polyethylene: containers, bags, bottles, boxes, etc.) grained or textured surfaces (parts of mirrors, body trim), acrylic paints.
- Vinyl film is not a cure for rust. It is recommended that vinyl film is only applied to paintwork that is in good condition.
- Avoid applying the vinyl film on unpainted surfaces like trim or unpainted bumpers.
- For other substrates: Conduct preliminary substrate vinyl adhesion test by applying a sample of vinyl and evaluating how well it adheres or does not adhere.
- Viking films achieve optimum adhesion after 24 hours of contact.

## **2. CONDTIONS**

The pressure activated Nanotåkt adhesion technology allows for sliding and reposition the film over the surface of vehicle until you apply firm pressure. The film has an initial light adhesion which allows corrections to be made with ease. The Viking designed coloring, metallic effect, and structure remain constant during heat shrinking. The Km2 release liner allows installers to benefit from a bubble and crease free installation while saving valuable installation time. This structured adhesion and release technology which makes transfer and application easy ensuring optimum installations. To achieve the maximum output from this technology, correct storage precautions, a controlled working environment needs to be created, and proper working temperatures need to be maintained.

### **2.1 Vinyl Storage**

- Avoid direct exposure of the vinyl to high temperatures (direct sunlight, heaters, etc.)
- Vinyl should be kept vertically or horizontally hung on racks.
- Rolls should never be placed on their sides as this can lead to large matt sections appearing in the whole roll. It is normal to have matts in parts of the vinyl. The vinyl will regain its appearance once it is applied to a substrate. A heat source (heat gun) used during application will remove the matts and the film will regain its original finish.

### **2.2 Environment**

It is recommended that film be applied indoors, in a clean, well-lit and dust free environment. Wetting or misting the surrounding areas (NOT the working surface) will help lower the amount of dust and contaminants from collecting on the working surface or the vinyl adhesive.

### **2.3 Temperature**

Temperature is a critical component to how well the vinyl adheres to the substrate and its repositionability.

Do not bring the vehicle in from the cold or heat and begin to apply the vinyl film. It is important to let the car acclimate to the room temperature before applying the vinyl film. The recommended minimum working temperatures is 10°C (50°F).

- If the substrate surface temperature is hot, the adhesive will be more aggressive and may begin to activate upon contact. Difficulties with the repositioning of the vinyl may occur.
- If the substrate surface is cold the vinyl will become brittle and the conformability of the vinyl will be affected.

### **3. CLEANING & PREPARATION**

The most critical part of installing vinyl films is in the cleaning and preparation. Viking films can be applied to wide variety of substrates under the condition that the target surface is clean, dry, smooth, non-porous and without any traces of oil, wax, silicone, grease or other contaminating agents.

Always assume the substrate is contaminated and requires cleaning. Some residues or contaminants may not be visible and will affect the adhesion of the vinyl film and leave bumps and air bubbles in the vinyl.

Note: Do not forget to conduct a preliminary adhesion test in a small area to check that the substrate is compatible.

#### **3.1 Cleaning Products & Tooling**

- Grease & Wax Remover
- Isopropyl Alcohol
- Clay Bar
- Lint free towel & Microfiber towel
- Squeegee (various sizes)

#### **3.2 Surface Preparation Procedure**

The ultimate goal is to get the surface as clean and containment free as possible. Clean surfaces will allow the vinyl optimum adhesion, durability, and longevity.

Steps:

1. Wash, clean and rinse the surface with soap and water to remove organic containments (bug, sap, dirt, etc.) from vehicle's surface. Do not use cleaners that contain waxes. A Wax residue will affect how well the vinyl's adhesion.
2. Thoroughly dry the surface with microfiber and/or lint-free towels. It is critical to clean and dry ridges, recesses, ridges, edges, seams, anywhere and everywhere dirt can be trapped. If the surface is not cleaned properly, anchor points and corners where the film tuck or hold the vinyl to the surface may peel or fail. A Squeegee wrapped in a lint-free towel of microfiber will allow access of hard to reach areas (behind trim, molding, seams, etc.) to be cleaned and dried.
3. Lights, handles, trims and any other application should be removed, where possible, before application.
4. Once the vehicle is clean and dry, Petrochemicals (grease, wax, tar, oil, gas residue, etc.) now need to be cleaned from the surface areas. Any surface left with these types of containments will greatly affect the film adhesion and may leave contaminant bump/bubbles on the uncleaned areas. Clean the surface areas with Isopropyl Alcohol (80% denatured alcohol: 20% water) and wipe dry before the isopropyl alcohol as had time to evaporate.

5. Not required- **HIGHLY RECOMMENDED**: After cleaning the surface areas with Isopropyl Alcohol, we highly recommend using a detailing clay bar and water to further remove the surface area from contamination. This step makes a huge difference in the final surface finish quality of the vinyl.
6. Make sure the substrate is completely dry before applying the film. Pay practical attention behind trim and edge's. If not completely dry, any moisture trapped beneath the film could lead to failure. A heat gun will speed this process up if necessary.
7. Before removing the vinyl's release liner and applying the vinyl to a panel, we recommend wiping the working surface area down once more using a tack cloth. Cleaning once more with a tack cloth removes the dust or contaminants may have re-accumulated on the working surface. Repeat this step for each panel or substrate.

Note: Newly painted vehicles or surfaces must be dried and hard for 7 to 10 days. Air dried paints need to be dried for a minimum of 1 month before applying the film.

#### **4. INSTALLATION**

- The application of the film to a vehicle is best performed by two people and overall wrapping times, can be drastically reduced.
- Viking films must be dry applied. However, the installer, may use a wetting solution on top of the film layer to provide some slip resistance for the squeegee.
- Viking's Nanotåkt film adhesion technology lets you easily reposition the vinyl on the substrate.
- The recommended minimum working temperatures is 10°C (50°F).

##### **4.1 Installation Tools**

- Soft and hard squeegees
- Heat Gun
- Utility knife
- Tape Measure
- Cleaning Cloths (Tack Cloth)
- Heat Gloves
- Magnets/Tape
- Primer/Edge Seal Tape
- Knifeless Tape

##### **4.2 Installation placement steps**

1. Position the film on the substrate surface to hold it in place without stretching it.
2. If working on a large area, use magnets or masking tape, make a hinge on a flat area.
3. Slowly peel off a section of the release liner at the hinge point at an angle of about 30° -40° to lower the chance of attracting dust.
4. Keeping the material taut by holding both the top corners, start applying the vinyl using the edge of a squeegee covered in felt at a 45° angle. Using overlapping strokes (ignore recesses

for the moment) from the center towards the edges. The unique adhesive will allow air bubbles to be dispersed easily. If any large bubbles, become trapped or a crease appears then lift the vinyl away from the surface and gently heat the imperfection and then re-squeegee. When applying, examine the vinyl and surface areas to make the most efficient way for the air to route out from underneath the vinyl to the edges

5. Remove the hinge (magnets/masking tape) and continue removing the release liner and applying overlapping squeegee strokes. It is essential that the whole surface area is thoroughly squeegeed during application. If material is left without being finished at some point during the whole installation process, glue lines or stress marks may become noticeable upon completion.
6. When recesses and step changes are encountered, the film should be laid or fed into and around these sections applying a little tension as possible. If using heat, used only the minimum amount required to make the film soften and relax allowing it to be worked into small areas stretching the vinyl applied to the flat section.
7. Once the vinyl is applied and any air bubbles present are pressed and dissipated. Heat the film again in these areas to around 45°C (113° F) to ensure the adhesive is fully activated and the vinyl is set. This helps ensure adhesion in the difficult areas.
8. Post heat the surface areas to between 82°C (180° F)

#### **4.3 Surface Types & Heating**

For compound curves and complex multi curves, special techniques must be used. If using a heat gun\*, keep it 6” to 8” away from the vinyl and use broad sweeping movements to heat and relax the vinyl. Use only the minimum amount of heat at all times. Overheating the film will contribute to adhesive failure and risk burning through the vinyl.

1. Concave Surfaces – Recesses:
  - A. Remove all of the release liner
  - B. Stretch the vinyl over the substrate so that the film touches the peaks of the surface only.
  - C. Apply the film with a cotton/heat glove or a felt covered squeegee. (Heat maybe necessary)
  - D. If heat is necessary, the material should be heated above the recess and the material stretched on the flat/straight section\*. The material should now be fed into the recess without any need to stretch or heat this area.
  - E. If necessary, lift up the vinyl and re-stretch the film. Then reapply.
  - F. Heat to around 45°C (113° F) and with a finger press into the hollow area to apply the vinyl’s adhesive.
2. Convex Surfaces – Compound Curves:
  - A. Remove the release liner
  - B. Heat the vinyl and then stretch the film so s to completely wrap the convex surface.
  - C. Apply the vinyl over the entire surface area with the help of a felt covered squeegee, with overlapping strokes over the entire convex area to eliminate any tension.
  - D. Once the vinyl is applied and any air bubbles present are pressed and dissipated. Heat\* the film again to around 45°C (113° F) and squeegee again.
  - E. Let the vinyl cool.
  - F. Cut the vinyl and post heat the surface area to 82°C (180° F) for optimum adhesion.

### 3. Riveted Surfaces:

- A. When you encounter a rivet, the vinyl will become stretched. Apply mild heat\*.
- B. With a squeegee go all around the rivet and poke the rivet 1-2 times with a needle/air bubble tool (do not use a utility knife) to help release any trapped air.
- C. Post heat the rivet surface area to 82°C (180° F) for optimum adhesion.

\* Heating chrome finishes: Anything other than mild to moderate heat may possible discolor and haze the highly desired reflective surface of the chrome vinyl. Exercise extreme care when heating chrome finishes.

## 4.4 Finishing

Finishing is a critical component to transforming a painted surface into one that can achieve visual appearances that most paints can never achieve. Making the application transform into a finished product requires experience and details. Improper finishing will lead to premature failures in the edges and surface of the vinyl

### 1. Edges:

The film should not be cut flush with to the edges of hoods, doors, or panel edges. Instead, the film should be wrapped around the edges by about 6mm (¼”) to minimize the exposed edges of the vinyl.

On vehicles, the application of film on seals between windows and/or body panels must be avoided.

Application to the materials such as ABS, PP or rubber is not recommended.

### 2. Overlaps:

If overlaps of widths become necessary, Viking recommends an overlap seam of ¼”

- A. Vertical Overlap: The vinyl is applied starting at the rear towards the front of the vehicle. Overlaps will be in the direction of the flow movement.
- B. Horizontal Overlap: Top vinyl panel overlapping the lower vinyl panel.

### 3. Edge Sealing Primer, Edge Sealing Tape, Seal Varnish:

Edge sealing primers (i.e. Pro-Bond) can be on the surface of difficult edges or compound curve prior to installing the vinyl film. Viking recommends using an Edge seal tape is for vinyl post installation on difficult edges. Sealing Varnish is required for boats and heavy machinery to reinforce the edges.

Note: Edge Primers can lead to paint/clear coats damage on vehicles upon vinyl wrap removal.

## 4.5 Post Heating

When the application of cutting, rolling and tucking edges and corners and the installation of the vinyl is finished, reheat all the areas. Pay particular attention to the areas that underwent conforming and deformation. The post heat temperature should be between 82°C (180° F). This temperature can be taken using an IR Thermometer. Air bubbles may appear during the post heating process and can be depressed using a finger or squeegee.

## **5. AFTERCARE & CLEANING**

Once the vehicle is wrapped, it will need to be kept in a heated environment (room temperature) for 24 hours after application. Any physical aggression (cleaning, abrasion, etc.) must be avoided by all means during that time.

### **5.1 The Do's**

- Washing by hand with a blend of mild car wash detergent and water is the recommended cleaning option.
- Water temperatures should be between 20°C (67°F) to 25°C (77°F).
- If possible, Viking recommends storing the vehicle in a garage or covering the vehicle with a car cover. Vinyl is similar to paint in that exposing it to direct sunlight and UV rays for elongated periods of time may lead to fading of the coloring or textures. Some colors and texture fade quicker than others, so storage and maintaining a clean surface will help promote the longevity and durability of the vinyl.
- Once the surface is clean, there are many excellent vinyl aftercare products on the market that will help clean and protect the vinyl film.
- Always carry out a test on a small area before you clean the total surface area of a vehicle wrap.
- Viking recommends performing waterless car washes using vinyl care products in-between major car washes.

### **5.2 The Don'ts**

- Do not wash the vehicle for 4 days to allow the vinyl adhesion to fully cure.
- Do not clean the vinyl with solvent-based cleaners or corrosive detergents.
- Do not apply carnauba-based waxes.
- When cleaning matte or textured films, do not use soaps with wax or protectants. These will damage the surface finish of the vinyl film.
- Do not use circular movements when washing or drying the vehicle.
- Do not use brush-type automatic car washes. Automatic brush carwashes could damage the texture of the vinyl and may cause vinyl adhesion failures.
- Do not allow fuels to stay in contact with the vinyl for extended periods of time. Clean all spills as soon as possible.

### **5.3 Pressure Washing**

- Exercise extreme care when using a pressure washer. No more than medium to light pressure should be applied while keeping the spray nozzle a minimum of 50cm (20 inches) away from the surface.
- Use a spray nozzle with a 40° wide angle spray pattern. Avoid spraying at extreme angles.
- Repeated pressure washing can cause the vinyl to lift around the edges and peel away from the vehicle, especially if the spray is at a sharp angle to the vinyl.



- Over time, repeated pressure washing can degrade the face film, causing the vinyl to lose its luster, fade, crack and even chip away.

#### **5.4 Washing & Cleaning Procedure**

Supplies:

- Hose with standard spray nozzle attachment
- Bucket
- Mild car wash detergent
- Soft cotton cloth or microfiber sponge
- Dry microfiber cloths

Hand washing steps:

1. Rinse the vinyl with water to wash away any loose sediments, dust, dirt with the hose and spray nozzle
2. Mix the water with the mild detergent into a clean and containment free bucket.
3. Soak sponge with soap and water mixture.
4. Clean the vinyl starting from the top scrubbing to the bottom. This will allow the dirty, contaminated water to drip to the ground.
5. Rinse the vinyl with clean water using the hose and spray nozzle
6. Once the vinyl is rinsed, use a microfiber to dry the vinyl film.
7. Once dry, for added protection, you may apply a Silone or Teflon-based polish designed for vinyl films.

#### **5.5 Spot Cleaning**

When normal cleaning procedures do not work to remove difficult debris, try the following.

1. Spot clean area with a microfiber cloth and isopropyl alcohol.
2. Moisten a cloth with a citrus-based cleaner and wipe down the problem areas. Immediately after using the citrus cleaner, rinse the area with a blended mixture of mild soap and water.
3. Scuffmarks should be removed by a gentle rub with “T-Cut” cutting compound and the gloss brought back by reheating the vinyl.

### **6. REMOVAL**

- Viking vinyl films are engineered with a high-quality adhesive. For this reason, the vehicle should be placed in a warm environment at or above 20°C to (68°F) for at least 2-3 hours before attempting removal.
- Heat the vinyl to a temperature of 60°C (140°F) using a heat gun. A commercially available superheated steam device is also a good option.
- Starting at an edge, gently peel approximately 12 inches of the vinyl away from the edge of the surface and make a cut away from the vehicle. The film should be peeled at an angle of 70° to 80° relative to the substrate. The method of removing the film at an angle will reduce the chance of paint coming off the vehicle.
- Work gradually down the vehicle working in 12 inch sections.

- Continue heating and carefully peel the film so as to avoid the risk of breaking up the film and of leaving any adhesive of the surface.
- If any adhesive remains on the substrate, use a piece of cloth coated in adhesive remover and gently rub the surface until all the adhesive traces have been removed. Viking always advises that a trial patch is tested when using adhesive removers.
- Viking suppliers cannot be held responsible for inappropriate removal methods or for poor paint/lacquer adhesion to the vehicle's bodywork.

## **7. WARRANTY**

Trained experts are responsible for the quality of the application, while the responsibility for compliance with the maintenance and usage lies with the owner of the vehicle. The information provided in the Technical Data & Performance, Viking's informative guidelines, and website is based exclusively on our current knowledge and experience. It constitutes neither a warranty of certain properties nor a quality or durability guarantee with regard to our Viking vinyl films. Viking is not responsible for cost incurred for the removal of our films.

### **Viking does not warrant removability from the following substrates:**

- Surfaces with poor paint-to-substrate adhesion
- Wallboard (painted or unpainted)
- Pre-existing graphics that must remain intact; damage to existing graphic when the film is removed
- Improperly cured paint
- Oxidized or chalked substrates
- Stainless steel.

### **Viking makes no warranty for:**

- Paint/clear coat staining: Viking does not warrant vehicle paint staining that may be visible after removing material which has cracked or discolored.
- Ease or speed of removal of any graphic
- Removal from automotive paint that is greater than 5 years old.
- Removal from paint that is improperly cured
- Removal from aged paint or metals, surface oxidation or chalking; user must test, approve and accept liability for such applications.