

# **INSTALLATION GUIDE**

SLX®+ With FLITE Technology

Technical Services August 2020 North America, Latin America, Australia, New Zealand



Reading and following this Installation Guide will ensure you as the applicator are equipped with best practices when applying SLX+.

#### **APPLICATION TOOLS**

- Heat Source(s):
  - Heat gun
  - IR heater
  - Propane torch
- Squeegees
- Lint-free application gloves

- BodyGuard Knife
- Knifeless Tape
- 9mm snap-off blades
- IR Thermometer
- Magnets
- Masking Tape

## PREPARATION

BEST PRACTICES	BENEFITS
<ol> <li>Vehicle should to be delivered "street clean"</li> <li>First, the vehicle needs a basic wash before shop drop-off and then, the shop will clean the vehicle in detail.</li> </ol>	A "street clean" vehicle helps maintain a clean zone in the shop and prepares it for a more detailed cleaning prior to wrapping.
2. Install in a clean and controlled environment Surface Temperature: 60°F - 90°F (15°C - 32°C) Relative Humidity: <85%	Climate control creates optimal conditions for an efficient application. Regulating humidity will prevents moisture build-up on the surface that may hinder adhesion.
<b>3. Tape off or remove hardware</b> Side mirrors, door handles, auxiliary turn signal lights, third brake lamp, vent trims, badge and emblems, roof molding and railings, antenna, etc.	Removing hardware allows for a thorough cleaning of the edges and gaps. Eliminating or taping off protruding components increases efficiency and minimizes the risk of overstretching.
<i>4. Always check if all panels and artwork are included in the kit</i> Dry fit all the panels to ensure proper graphic placement and alignment.	Double checking the kit's contents guarantees a smooth application process and on-time delivery.

PRECAUTIONS	BENEFITS
Arlon does not warrant applications on aftermarket paint or dam- aged paint.	Aftermarket or damaged paint will hinder adhesion and may peel off during installation or upon removal.
Avoid wrapping a freshly painted car. Only apply graphics after paint is fully cure according to the paint manufacturer's specifications.	If the surface is wrapped before the paint fully cures, bubbles will form as the paint outgasses and may also lead to adhesion failure.



### **INSTALLATION**

BEST PRACTICES	BENEFITS
<ol> <li>Apply with a buffered squeegee         Use the unbuffered side to work out sharp wrinkles. Different         squeegee shapes and hardness also depends on the installer's         preferences.     </li> </ol>	A buffer prevents squeegee scratches on the film. See <i>WrapItRight® Video: Basic Squeegee Skills</i>
<ul> <li>2. Squeegee with firm pressure and overlap strokes</li> <li>Harder squeegees allow for a more direct transfer of force.</li> <li>Overlap strokes by about 50% of the squeegee's width.</li> </ul>	Good squeegee technique ensures maximum surface coverage and adhesive contact.
<ul> <li>3. Place the seams properly with at least 1/2" (12mm) overlap</li> <li>For vertical overlaps, start with the rear panel</li> <li>For horizontal overlaps, start with the bottom panel</li> </ul>	The seam edges will be less likely fail or get damaged because they will be facing away from the elements.
<ul> <li>4. Use heat to stretch the film Heat Range: 100°F - 120°F (38-49°C) Maximum Stretch: 25% NOTE: Maximum stretch may be lower depending on the ink and saturation. The ability to hold the stretch also depends whether the surface is concave or convex. </li> </ul>	Heat softens the film and allows it to stretch and conform to curves and channels. The upper temperature limit prevents the film from being too soft which may lead to image distortion, color shift, and edge curl.
<ol> <li>Distribute the stress on curves and channels Heat a larger area and gently stretch in multiple directions.</li> </ol>	Spreading the stretch over a larger area lowers the stress on small areas, thus reducing the risk of popping or edge curling. See <i>TIP 38: Installation Technique for Channels</i>
6. Use the Pre-stretch and Shrink Method in compound curves Bumpers, side view mirrors, fender arches, etc.	This method takes full advantage of the "memory effect" and prevents the edges from curling or bottle-capping. See <i>WrapItRight® video: The Pre-Stretch and Shrink Method</i>
<b>7. Pre-panel or use Channel Extensions</b> Use the second panel or a scrap vinyl to manage the distortion on stretched edges.	Pre-paneling allows the overlapping edges to stretch in unison while channel extensions will smooths out any edge distortion upon stretching. See WrapItRight® video: Eliminating Edge Distortion with a Channel Extension
8. Clean the edges of the applied panel with diluted alcohol A 70% dilution of alcohol in water is recommended.	A quick wipe on the edges will remove some skin oils or other contaminants and maximize the adhesion at the overlap.
<ul> <li>9. Use the Expanded Pocket Technique where inlays are not applicable.</li> <li>The Expanded Pocket allows for continuity in the printed graphic, but inlays can accomplish the same if strategically placed.</li> </ul>	The Expanded Pocket shifts most of the stress away from the deepest parts of stretched vinyl. See <u>WrapItRight® video: Managing Heat and Tension</u>

PRECAUTIONS	BENEFITS
When considering the amount of stretch necessary, avoid installing both concave and convex curve profiles with the same approach.	Convex curves such as bumpers and mirrors will require Pre- stretch and Shrink Method. Concave curves such as channels require shifting tension to the flat areas or use the <i>Deep Channel</i> <i>Hack</i>



## **FINISHING**

BEST PRACTICES	BENEFITS
<ol> <li>Avoid stretching on areas that will be cut</li> <li>Edges, wheel wells, seams, overlaps &amp; channels.</li> </ol>	Use a technique that will minimize stretching the film where it will be cut to avoid premature failure such as edge curling, lifting, or bottle-capping.
<ul> <li>2. Post-heat before trimming Always follow the specified temperatures: <ul> <li>Add 25°F (+15°C) to the ambient temperature when heating flat surfaces</li> <li>200°F and 220°F (95°C and 105°C) for edges, seams, and other stretched areas</li> <li>Post-heating is a time consuming yet vital step of the wrap process. Work in small sections and reapply pressure.</li> </ul></li></ul>	Post-heating softens the adhesive to increase flow; expose trapped air and unapplied areas; anticipate the hottest temperature in can be exposed; and relieve some stresses in the film.
3. Be proficient in using Knifeless Tape If cutting by hand is absolutely necessary, frequently snap a new blade and apply <i>FineLine Tape</i> to provide a safe cutting surface.	Knifeless or FineLine Tape provides a preview of cut lines and prevent cutting the vehicle's paint. Snap a new blade frequently for high quality edge cuts and prevent the need for double-cutting.
<ul> <li>4. Wait for 15 minutes before trimming</li> <li>Let the film cool and stabilize before trimming and leave 1/8"</li> <li>(3 mm) of overhang to properly tuck the film.</li> </ul>	Allowing the film to cool and stabilize before cutting ensures better adhesion on the edges.
5. Use the proper technique on corners Techniques such as Painted-edge Corner, Cut & Overlap, and Cold Pre-stretch can be used on corners.	Corners may be small, but the impact is enormous in terms of quality.
6. Overnight dwell time If possible, let the vehicle dwell overnight in the shop prior to delivery to customer.	Letting the vehicle dwell in the shop allows the adhesive to build before being exposed to the elements. In case of a missed area or edges were improperly installed, it can be easily fixed without being contaminated by outside elements.

PRECAUTIONS	BENEFITS
Avoid trimming while the film is warm.	Warm film is too soft to make a clean cut and yield jagged cuts.
When post heating with high temperatures, do not just heat the film without reapplying pressure.	Reapplying pressure ensures maximum adhesive contact by increasing the adhesive flow and closing air egress channels.
Avoid cutting directly on paint.	Deep cuts on paint are vulnerable to peel off paint when the graphic is removed.
Avoid overstretching on the corners.	Corners converge at a small area and does not have enough adhesive to hold a high stress area in place.



## MAINTENANCE

BEST PRACTICES	BENEFITS
<b>1. Regularly wash a wrapped vehicle</b> Hand washing is preferred but if using an automated carwash, use the touchless option.	Wash a wrapped vehicle regularly to ensure its longevity. Touchless car wash minimizes the risk of scratches, chips, swirls, and edge lift compared to the brush-type cleaning method.
2. Use precautions for power washing The nozzle pressure should not exceed 1,300 PSI (90 Bar). Keep the tip at least 5' away from the vehicle and the spray angle of no shallower than 60° from perpendicular.	See TIP 46: Fleet Graphics Post-Care & Cleaning Instructions

PRECAUTIONS	BENEFITS
Allow one week to pass from the installation date before washing the vehicle.	Waiting a week before washing prevent the film from being dis- turbed as it approaches its maximum adhesion.
Always follow the manufacturer's recommended dilution ratio of detergent and water.	An overly concentrated solution can damage both the adhesive and the vinyl.

## REMOVAL

BEST PRACTICES	BENEFITS
<ol> <li>Use heat when removing the wrap Heat the film to 90°F-150°F (30°C-65°C) before peeling it off the vehicle.</li> </ol>	Removal becomes easier because heat softens the film to tempo- rarily lowers the adhesive's shear holding force and at the same time, reduce the risk of tearing.
<b>2. Peel the film with safety in mind</b> Remove the film at a slow and steady pace at an angle no greater than 90°.	There is personal safety risk and potential damage to the vehicle when peeling off a wrap. If the film suddenly tears, the installer can fall off a platform and/or damage the vehicle. A slow and steady pace is required as a sudden change in peel- ing force may cause layer separation, delamination and/or film tearing. See <i>TIP 44: Fleet &amp; Vehicle Wrap Removal</i>

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