

FlexiShield
Paint Protection Film


ZOLUTION[®]™


PROFESSIONAL INSTALLATION GUIDE

Enhanced Ionic Slip & Tack System
for **FlexiShield 2.0**

Key Features

 Controlled
Slip & Grab

 Customisable
Install Behaviour

 Optimised for
Modern Paint

 Faster, Cleaner
Installs

 Clean Edges &
Strong Anchoring

 Professional-Grade
Consistency

A brand of:

 **REFLEK**
TECHNOLOGIES CORPORATION

ZOLUTION™

PPF READY SURFACE PREPERATION

A flawless PPF installation depends on paintwork that has been fully neutralised.

Modern vehicles carry layers of silicones, waxes, polymers, transport sealants, polishing oils, and chemical residues that interfere with adhesive behaviour. Proper preparation ensures predictable slip, strong bonding, and long-term film stability.

1. Pre-Wash & Initial Cleansing

Begin with a pre-wash using snow foam or a mild citrus-based cleaner to break down loose dirt and organic grime.

Follow with a contact wash using a pure, additive-free shampoo containing no conditioners, waxes, polymers, or gloss enhancers.

2. Mechanical & Chemical Decontamination

Carry out full physical and chemical decontamination:

- Iron fallout remover to dissolve embedded ferrous particles
- Tar remover to break down oils, asphalt, and adhesive residues
- Clay bar or clay mitt using a neutral lubricant to remove bonded contamination

At this stage, the paint is physically clean but remains chemically loaded.

3. Citrus Pre-Wipe

Apply a citrus pre-wipe to remove - Residual oils from tar removers, Detergent and polymer films, Clay lubricant residue, Weakened waxes or sealants and Organic oils trapped within the clearcoat

Rinse thoroughly. This restores the surface to a more uniform, bare state before deeper neutralisation.

4. Mineral & Film Remover Cleaning

Use a specialist mineral and film remover to strip away invisible but critical contaminants:

- Mineral deposits and water-spot scaling
- Ceramic coating remnants
- Synthetic sealants
- Hydrophobic layers and Long-term wax build-up.

This stage is where the surface becomes truly neutral.

5. Panel Wipe & Degreasing (IPA)

Refine the surface using a solvent-based panel wipe to eliminate:

- Polishing oils
- Silicones
- Mineral remover residue
- Fingerprints
- Remaining chemical traces.

Use clean, lint-free microfibres and rotate regularly to prevent re-contamination.

6. Paint Correction (If Required)

Carry out paint correction where necessary.

After polishing, repeat Step 5 to ensure all oils and fillers are fully removed.

7. Final Neutralisation – Modern Paint Considerations

Historically, a neutral surface allowed water to sheet cleanly with zero beading. Modern clearcoats and factory transport sealants may still exhibit surface tension even after chemical stripping.

A PPF-ready surface is defined by:

- No slick or wax-like feel
- No applied hydrophobic behaviour
- No polymer drag
- No chemical residue
- A consistent surface that delivers predictable slip and anchor behaviour.

Water behaviour is a guide - not the sole indicator on modern paint systems.

8. Ideal Installation Environment

Temperature:

18–24°C

Below this range: slow or inactive adhesive

Above this range: aggressive grab and rapid slip evaporation

Relative Humidity:

40–55%

Low humidity increases static and slip loss

High humidity risks moisture entrapment, hazing, and inconsistent bonding

9. Ready for ZOLUTION & PPF Installation

At this stage the surface is:

- Chemically neutral
- Free from protective layers
- Clean, consistent, and predictable

Optimised for immediate PPF installation using **ZOLUTION**.

ZOLUTION™ QUICK START

Enhanced Ionic H₂O Slip System

For Professional Installers Only

ZOLUTION is engineered to give installers full control over slip, grab, and adhesive activation. Correct mixing, water choice, temperature management, and technique are critical to achieving consistent results.

1. Mixing Instructions

Standard Ratio

10 ml per 1 L
(100 ml bottle = 10 L)

Working Range

5–14 ml per 1 L

This range allows installers to fine-tune film behaviour based on environment, panel size, and personal install style.

• Lower ratios (5–8 ml/L):

Faster grab, more aggressive hold. Ideal for cold environments, deep recesses, and high-precision installs.

• Mid ratio (9–11 ml/L):

Balanced slip with predictable grab. Recommended default setup.

• Higher ratios (12–14 ml/L):

Maximum glide with slower grab. Ideal for large panels, hot environments, or complex shapes.

Do Not Exceed 14 ml/L

Above this level, slip becomes overly dense and lubricated, increasing the risk of ionic pooling at edges and extended drying times.

Edge flushing and additional drying time become mandatory.

2. Water Type Effects

Water mineral content directly affects slip behaviour and adhesive activation.

• Deionised / Reverse Osmosis:

Fastest grab, cleanest optical finish

• 50/50 Deionised + Bottled Mineral Water:

Smoother movement with a slight (1–2 sec) grab delay

• Full Mineral Water:

Slowest grab with maximum glide

3. Working Temperatures

Ideal panel temperature: 20–25°C

Adhesive activation begins: 35–40°C

Rapid adhesive bonding: 55°C+

Use a laser thermometer to understand and control adhesive behaviour across different panels and conditions.

4. Installation Basics

- 1) Evenly mist **ZOLUTION** onto the panel surface.
- 2) Evenly mist the adhesive side of the PPF.
- 3) Lay the film and slide into position.
- 4) Begin bonding using firm, even squeegee pressure or controlled heat at 35–40°C.

Use 45–55°C for strong anchoring in high-tension areas.

5. Tools for Faster, Cleaner Installs

Negative-Ion Hairdryer – Rapid Edge Finishing

- Breaks slip water clusters
- Evens moisture removal
- Reduces surface tension
- Warms substrate and adhesive to optimal flow temperature (35–40°C)

Method:

- 1) Blow gently along the film edge to remove excess slip while warming the substrate.
- 2) Allow ionised air to collapse the remaining slip layer.
- 3) Squeegee and seal the edge immediately.

Steamer – Strong Position Hold

Ideal for deep recesses, corners, and technical shapes.

Benefits:

- Even heating of film and slip
- Increases pliability without over-softening
- Accelerates adhesive bonding and ionic collapse

Method:

- 1) Warm the top surface of the film and panel to 40–50°C.
- 2) Position while warm.
- 3) Squeegee to lock bonding.
- 4) Avoid directing steam under the adhesive, as excess moisture can delay bonding activation.

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6. Edge Finishing Options

- **Wet Seal:** Heat film to ~35°C and squeegee through slip
- **Dry Seal:** Blow out slip, warm gently, then finish
- **Negative-Ion Dryer Seal:** Warm, collapse slip, remove moisture, and finish in one step
- **Natural Dry:** Allow edges to dry naturally, then seal later with controlled heat

Avoid allowing pooled water to dry at edges.

7. Troubleshooting

- **Floaty / Slow Grab:**
Ratio too high or excessive mineral content — reduce concentration or add heat
- **Grabs Too Fast:**
Increase concentration slightly or add small mineral content
- **Drag / Poor Slip:**
Surface contamination still present — remove waxes, coatings, or minerals
- **Patchy Grab:**
Uneven heat application or inconsistent squeegee pressure
- **Edge Lifting:**
Moisture trapped — blow out immediately
- **Haze / Streaks:**
Excess slip or moisture retention — apply heat and pressure

8. Final Step – Post Heating

After 12 hours, post-heat all edges and recessed areas to the film manufacturer's specified temperatures to ensure long-term adhesion and stability.

Professional Installation Aid for FlexiShield 2.0

Precision-engineered to deliver controlled slip, predictable grab, and consistent adhesive performance across modern automotive paint systems.

Designed for professional installers who demand speed, accuracy, and repeatable results.

Key Benefits

- Controlled slip & grab balance
- Faster installs with fewer re-lifts
- Cleaner edges and stronger anchoring
- Adjustable ratios to suit installer preference
- Optimised for modern clearcoats

Professional Use Only

Always follow recommended surface preparation, mixing ratios, and temperature guidelines. Performance is dependent on correct paint neutralisation and controlled installation conditions.

FlexiShield UK Official

Paint Protection Film | Installation Systems | Professional Support

