FORMULA 131

APPLICATION INSTRUCTIONS

ETCH & STAIN PROTECTION

FOR HONED MARBLE

INDEX

FORMULA 131 ETCH AND STAIN PROTECTION KIT.....4

APPLICATION INSTRUCTIONS.....7

FORMULA 131 ETCH & STAIN PROTECTION KIT

Protect Your Honed White Marble Surfaces with Formula 131

Our patented Formula 131 water based sealer protects your honed white marble surfaces from etching and staining caused by household products, food and beverages for up to 24 hours. Outperforms the competition and is proven to protect stone surfaces.

Approved Application on Manufactured Honed Surfaces. Stone Types Include:

- Marble: Whites, Yellows, Beige and Light Grays. *(We do not recommend application to dark stone surfaces due to adhesion and may change the color of the surface)*
- Limestone
- Travertine

Not Recommended for the following stone surfaces: quartzite, granite, slate, or highly polished stone.

PERFORMANCE TESTING*	
Stain Resistance	24 HOURS
Chemical Resistance	24 HOURS
Abrasion Resistance	✓
*TCNA (Tile Council of North America) independent study	

STAIN RESISTANT

FOOD SAFE

WATER RESISTANT

ANTI-ETCHING & CHEMICAL RESISTANT

ENVIRONMENTALLY SAFE

"INVISIBLE" SEAL

FORMULA 131 ETCH & STAIN PROTECTION KIT

Formula 131 Etch & Stain Protection

Formula 131 coating for honed white marble is designed to prevent staining and etching, when properly applied. This formula is classified as being non-hazardous, having no VOCs, or harmful ingredients. During the application process we recommend the use of gloves and eye protection.

Before you begin the application process, calculate the volume of F131 needed based on surface area to be sealed. Once you have determined the necessary volume needs for your counter top surface, proceed with the instructions for application. It is critical that the Formula 131 application procedures and methods are followed to ensure consistent results are achieved every time.

STAIN TEST

Samples of honed white venatino marble were provided to the TCNA along with competitive sealers. TCNA personnel applied the sealers in accordance with manufacturer's instructions. Seven stain agents (per CTIOA-72) were applied and wiped off after 3 minutes. The results were then evaluated and graded according to CTIOA-T72 (a grade of 60 is required to pass; a grade of 70 is a perfect score). All competitive products failed after 3 minutes exposure. Formula 131 received a perfect grade after 24 hours exposure!

Tile Council of North America (TCNA) CTIOA-T72: Determinations of Effectiveness of Sealers on Porous Surfaces

Product Tested	Laticrete (Stonetech) Bulletproof Sealer	Custom Products/Aquamix Sealer's Choice Gold	Mapei Ultracare Penetrating Plus SB	Raw/Unsealed White Marble	Formula 131™ Sealer
Test Duration	3 min	3 min	3 min	3 min	24 hours
Test Score	50	55	55	45	70
PASS / FAIL	FAIL	FAIL	FAIL	FAIL	PASS

Source: Test Conducted by the Tile Council of North America (TCNA), Anderson, SC, April 2017.

FORMULA 131 WEBSITE

Scan QR Code

FORMULA 131 ETCH & STAIN PROTECTION KIT

Included in the 60 sq. foot Kit:

√	Item Name	Part #	Qty.
	Extension Poles	60110	2
	Adjustable 12-18” Roller Frames	60101	2
	6” Mini Roller Frames	60102	2
	6” Mini “Dripless” Roller	60103	1
	6” Mini High Density Foam Roller	60104	1
	12” “Dripless” Roller	60105	1
	12” High Density Foam Roller	60106	1
	18” High Density Foam Roller	60107	1
	18” Polyamide Roller	60108	1
	Paint Stir Spatula	60111	1
	600 Grit Sandpaper	60179	2
	5” Snail Lock Backer Pad	24ABRASS5	1
	6” Velcro Sandpaper Holder	VZ13396	1
	Wing Handle Knob	60130	1

60100

60101

60102

60103

60104

60105

60106

60107

60108

60111

60179

24ABRASS5

VZ13396

60130

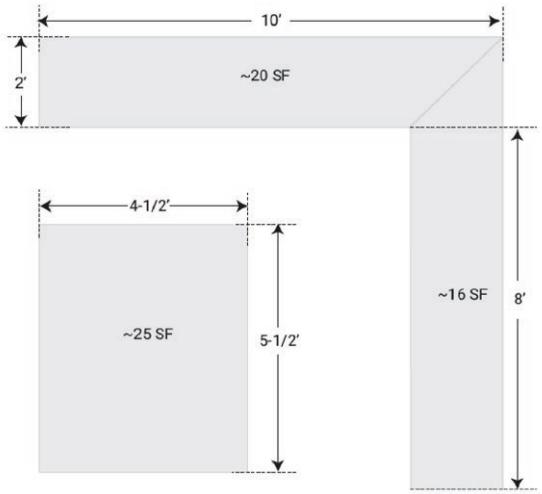
APPLICATION INSTRUCTIONS

Estimating Surface Volume

Estimating the volume of Formula 131 needed for your stone surface: When determining the coating application requirements, calculate the volume of F131 needed based on the calculated area of surface to be sealed. F131 typically will coat ~250 SF +/- per gallon of combined sealer (61 SF +/- per Kit), somewhat dependent on the porosity and finish of the stone.

Example of Volume Calculation: If fabricating 4 sets of countertops that measure 2 feet wide X 18 feet of combined length and complementary island surfaces measuring 4-1/2 feet X 5-1/2 feet that need to be coated:

4 X Total 61 SF each set = 244 SF -:- 250 SF/Gallon = 4 of the 60 SF kits needed.



NOTE: Formula 131 is delivered as a 2-part formula that is to be combined using a 3:1 ratio, meaning 1 part of the B component will get mixed with 3 Parts of the A component. **DO NOT** combine the two components until you're ready to begin application.

SURFACE AREA TO BE SEALED (SF)	TOTAL WEIGHT (LBS) OF SEALER TO BE MIXED (VOLUME)	WEIGHT OF PART B (LBS) TO ADD TO MIX CONTAINER	WEIGHT OF PART A (LBS) TO ADD TO MIX CONTAINER
< 60	2.2 (1 QT) - *1 kit*	0.55 (1/2 PINT)	1.65 (1-1/2 PINTS)
< 120	4.4 (1/2 GAL) - *2 kits*	1.1 (1 PINT)	3.3 (1-1/2 QTS)
< 240	8.8 (1 GAL) - *4 kits*	2.2 (1 QT)	6.6 (3 QTS)
< 360	13.2 (1-1/2 GAL) - *6 kits*	3.3 (1-1/2 QTS)	9.9 (1 GAL+ 1 PINT)
< 480	17.6 (2 GAL) - *8 kits*	4.4 (1/2 GAL)	13.2 (1-1/2 GAL)

F131 Sealing Process: Staging Area Setup & Surface Preparation

Proper preparation and staging are essential to ensure the effective and professional application of Formula 131 sealer. This section outlines the step-by-step procedures and best practices for organizing your workspace and preparing the surface.

APPLICATION INSTRUCTIONS

Staging Area Set Up:

Before beginning the sealing process, a well-organized staging area ensures efficient workflow, minimizes mistakes, and reduces mess or waste.

General Setup

Tools & Materials to Stage:

- F131 sealer containers (pre-loosened)
- Foam brushes (for detail work)
- Lint-free paper towels
- Microfiber cloths
- Masking tape (high-quality painter's tape)
- Protective surface covering (drop cloths, poly sheeting)
- Alcohol (isopropyl or ethanol)
- 220-grit wet/dry sandpaper (if prepping rough stone)
- Roller covers and handles (ensure free-spinning)
- Portable LED light or flashlight
- Optional: rolling cart or tray to hold tools

PRO TIP: Set tools on a tray or cart close to the working area, but away from active application zones to prevent contamination or tipping.

Staging Area Checklist

Here's a quick checklist to print or keep handy at the job site:

- All tools unboxed and laid out
- Roller covers spin freely
- Sealer containers loosened
- Masking applied as needed
- Light source positioned (and portable for shadows)
- Paper towels and alcohol prepped
- Surface dry, clean, and prepped
- Gloves on, protective sheeting in place

Environmental Considerations:

- Ambient temperature ≥ 70°F (21°C) **DO NOT apply below 55°F (0°C)**
- Relative humidity ≤ 35–40%

Horizontal Surface Application

Typical Applications:

- Large tile pieces or slabs
- Countertops
- Kitchen Islands
- Bar Tops
- Table Surfaces

APPLICATION INSTRUCTIONS

Best Practices:

- Use a flat, stable surface for loose stone pieces.
- If sealing installed surfaces (like countertops), prepare lighting that shines at a low angle across the stone. This helps reveal inconsistencies or missed areas.
- Use a portable LED light for consistent lighting as you move across large areas or into shadowed sections (e.g., under cabinets).
- Mask off adjacent areas, especially where stone meets:
    - Backsplashes
    - Wall cabinets
    - Appliances or painted trim

NOTE: Use only high-quality painter's tape to ensure clean lines and avoid adhesive residue.

Vertical Surface Application

Typical Applications:

- Backsplashes
- Waterfall edges
- Wall cladding

Key Considerations:

- If both vertical and horizontal surfaces are being sealed during the same application window, masking is not required between them, provided:
    - The first surface doesn't fully dry before the second is treated.
    - Sealing occurs within about one hour of each other.
- Always start with horizontal surfaces first, then move to verticals. This avoids dripping sealer onto freshly treated horizontal areas.
- For detail work, use foam brushes around:
    - Corners
    - Fixtures (faucets, sprayers)
    - Joints or seams

Lighting Reminder: Use a hand-held light to maintain visibility of the coating's progress and coverage, especially on vertical surfaces that cast more shadows.

FORMULA 131

APPLICATION INSTRUCTIONS

Surface Preparation:

Proper surface prep is crucial to achieving a smooth, uniform coating and long-term protection.

Evaluate the Stone

Check for:

- Embedded dirt or debris
- Uneven surface finish or pre-existing sealer
- Any prior damage or scratches

Reminder: F131 does **not act as a filler**. It won't hide deep defects, cracks, or stains. It is a **thin-film** finish for protection, not resurfacing.

Surface Cleaning Process

Step-by-Step:

1. **Sanding (Optional):**
    - For uneven or rough raw stone surfaces, **lightly sand** with **220-grit wet/dry sandpaper.**
    - Purpose: To hone the surface and achieve a consistent texture.
2. **Initial Wipe Down:**
    - Use a **wet lint-free cloth or paper towel** to remove debris and stone dust.
    - Follow immediately with a **dry soft cloth** to remove moisture.
3. **Final Surface Prep:**
    - Wipe the stone with a **light amount of alcohol** (isopropyl or ethanol) on a clean cloth.
    - This ensures quick evaporation and removes final contaminants such as oils or residues.

Do Not Use: Acetone – It may **permanently yellow** raw marble and certain stones.

Readiness for Sealing

The stone is ready for sealing when:

- The surface is **dry, dust-free,** and **residue-free**
- There is **no haze**, oily film, or sanding debris
- The temperature and humidity are within an acceptable working range

Best Practices:

- Formula 131 must be applied in **thin, even layers**.
- It is not intended to mask imperfections—**visual uniformity depends heavily on good surface prep**.
- Always use a **light source angled low** to catch reflections and coverage irregularities during application.

APPLICATION INSTRUCTIONS

- Keep a **clean paper towel nearby** to immediately blot any drips or spills during application.
- Have **extra gloves and towels** in the staging area to manage sealer contact and clean-up.

Formula 131 Coating Preparation:

Formula 131 is delivered as a 2-part formula that is to be combined using a 3:1 ratio, meaning 1 part of the B component will get mixed with 3 Parts of the A component. **DO NOT** combine the two components until you are ready to begin the application.

Application Instruction Preparation:

- Step 1: Coating Preparation
- Step 2: Perimeter Application
- Step 3: General Application
- Step 4: Back Rolling the Surface
- Step 5: General Application (Finish Coat)
- Step 6: Post Application Curing
- Step 7: Storage and Clean Up

Step 1: Coating Preparation

Proper preparation and mixing of Formula 131's two-part system is essential to achieve optimal performance and a consistent matte finish. The mixture must be thoroughly blended, free of unmixed material or air bubbles, and ready for the chosen application method (horizontal or vertical).

Mixing Procedure

Formula 131 consists of **Part A (liquid resin)** and **Part B (liquid with suspended powder)**. These must be mixed correctly to ensure chemical performance and surface consistency.

1. **Mix Part B First:**
   Important: Park B contains fine powered solids that settle during storage.
   Steps:
   A. Open the container of **Part B.**
   B. Insert a clean stir stick of mixing paddle.
   C. Begin stirring slowly and thoroughly.
      - Drag and stir stick across the **bottom** to loosen and lift the settled powder.
      - Scrape any powder clinging to the bottom or sides.
      - Continue stirring until the entire mixtures is **visually uniform** and **no gritty residue** clings to the stir stick.

APPLICATION INSTRUCTIONS

Do Not Shake Part B. Shaking introduces **air bubbles** that may remain suspended for long periods and **compromise the finish**.

2. **Combine Parts A and B:**
   Steps:
   A. While stirring continuously, **pour the entire contents of Part B into the Part A container**.
   B. Mix the combined solution thoroughly until fully blended.
   C. Let sit briefly if any foam or air bubbles are present, and **re-stir before beginning application**.

Tip: During longer applications (over 30 minutes), re-stir every 20–30 minutes. Drag your stir stick along the bottom and lift it upward. If any buildup is visible, continue stirring until the stick comes out clean.

Application-Specific Dispensing

Once mixed, the coating should be dispensed appropriately for horizontal or vertical surfaces.

1. **Horizontal Surface Application:**
   Tools:
   - Clean paper cup**.**
   - Stirred Formula 131 mixture.
   - Foam brush or short-nap roller (¼" nap woven recommended)

   Steps:
   A. Pour a manageable amount of the mixed formula into a **clean paper cup**.
   B. Pinch the rim of the cup to create a small "V"-shaped spout for **controlled pouring**.
   C. Pour a small bead of the coating directly onto the stone surface near an edge and roll through it in order to get the roller cover completely wetted from end-to end around the whole roller surface, and then begin spreading immediately, initially focusing on the surface perimeter (see step 2 below).

HINT: Work in manageable sections to maintain a wet edge and achieve uniform spread and thickness.

2. **Vertical Surface Application:**
   Tools:
   - Small **paint tray**
   - ¼" nap woven roller cover
   - Paint roller handle

   Steps:
   A. Pour a small amount of mixed F131 into the **well of the paint tray**.
   B. Load the roller by dipping into the well.
   C. Roll **out the excess** on the tray's angled section until:

- The roller is fully wetted.
- No visible dripping or heavy saturation remains.

D. Hold the roller at an angle over the tray:
   - If sealer runs or drips, squeeze out excess by additional rolling in the tray.

Best Practice: Apply from the **bottom up** for better control and reduced drips. Blend overlap areas smoothly for seamless appearance.

Ongoing Mixing Maintenance

During extended application periods:

- **Re-stir the mixture every 30 minutes.**
- Use the stir stick to check the bottom for any settled solids.
- Lift the stick straight up and visually inspect for clumps or residue.
- If present, continue stirring until fully re-suspended.

Why it matters: Settled material can lead to uneven curing, inconsistent appearance, and reduced protection.

Step 2: Perimeter Application (First Coat)

The **perimeter application** establishes clean, uniform coverage around the outer edges of the surface before filling in the larger field areas. This step is especially important to prevent overspill and ensure even edge blending, particularly at seams, vertical cuts, or transitions.

General Purpose

The goal of the perimeter application is to:

- Establish an **initial boundary** of sealer around the edge of the work area
- Ensure **even saturation** without drips, runs, or pooling
- Allow for seamless blending between **edgework and main surface coating**

Horizontal Surface Application:

Typical Applications:

- Kitchen countertops
- Table or island tops
- Horizontal slab tile installations

FORMULA 131

1. **Roller Preparation:**
   Tools:
   - ¼" nap **woven "dripless" roller cover**
   - Roller handle
   - Dampened paper towel or masking tape

   Steps:
   A. Prepare the roller cover:
   - Remove loose fibers by wrapping with **masking tape**, then peel off.
   - Alternatively, **wipe thoroughly with a damp, lint-free towel**.

   B. Prime the roller:
   - Pour a small **puddle of coating** (slightly longer than roller width) near a **corner** of the surface.
   - Roll the cover back and forth until **fully wetted**.
   - Add more sealer if the roller doesn't fully absorb it evenly or leaves dry areas when rolling.

2. **Edge Application Technique:**
   Steps:
   A. Begin applying the sealer **along the perimeter,** working from the initial puddle outward.
   B. Approach edges carefully:
   - Do **not allow excess product** to spill over the edge.
   - Lightly roll into the edge to ensure coverage without creating drips.

   C. Continue working around the **entire perimeter:**
   - Refill the roller from new puddles as needed.
   - Maintain consistent wetting and pressure to ensure even coverage.

PRO TIP: You can use the same roller to coat **vertical edges (**like beveled sides, cutouts, or sink openings) as you pass near them.

Vertical Surface Application

Typical Applications:
- Backsplashes
- Waterfall Edges
- Wall-mounted slabs or tiles

Tools
- Use the same ¼" nap roller, **pre-wetted** from a paint tray.

Steps:
A. Roll off excess in the tray until the roller is **evenly loaded but not dripping.**
B. Lightly **press the roller onto the vertical surface** near the top or edge.
C. Begin spreading in smooth vertical or horizontal strokes.

If runs or drips occur, immediately **roll across the run** in multiple directions to redistribute the excess sealer evenly across the area.

Tips for Detailing:

- Use a **foam brush** for:
- Corners
- Cabinet edges
- Transitions between surfaces
- Foam brushed offer more precision than rollers for tight or delicate spaces.

Detail Tip: Apply coating in **long, light passes** rather than dabbing or pressing, to maintain film uniformity on vertical surfaces.

Common Mistakes to Avoid

Mistake	Cause	Solution
Drips over edge	**Overloaded roller or aggressive rolling**	**Use less sealer; roll gently up to the edge**
Visible roller lines	**Uneven pressure or under-wetted roller**	**Re-load roller evenly and blend lines with cross-strokes**
Missed spots at perimeter	**Inadequate lighting or skipping corners**	**Use angled lighting and foam brushes for precision**

Lighting and Observation:

- Use angled, **low-positioned lighting** (e.g., LED flashlight or work light) to help you see:Corners
- Missed areas
- Streaks
- Runs or buildup at edges

Move the light source as you work to monitor finish consistency from all angles.

Step 3: General Application (First Coat - both horizontal and vertical)

After completing the perimeter application, you can proceed with coating the main field area. The goal is to achieve an even, uniform film with proper blending into the perimeter, without streaks, buildup, or dry spots.

General Setup

- Apply the first coat of **Formula 131** over the center of the surface area
- Ensure **consistent coverage** in both horizontal and vertical planes
- Maintain a **wet edge** and proper blending with the perimeter coat

Horizontal Surface Application

Typical Applications:

- Countertops
- Tabletops
- Islands
- Stone slabs laid flat

Tools:

- ¼" nap woven roller (dripless type)
- Optional: foam brush for touch-ups

Steps:

A. Pour a small puddle of coating slightly inside the completed perimeter.
B. Begin spreading the sealer using the **"crosshatch" method**:
   - Roll **North–South** (lengthwise).
   - Then roll **East–West** (side to side) across the same area.
   - This crisscross pattern ensures full wetting and even film thickness.
C. Continue pouring small puddles as needed, progressing across the surface in sections.
D. Overlap slightly with previously coated perimeter areas to blend edges smoothly.

Re-roll over the perimeter as needed while still wet to ensure full integration of the coating—this prevents visible lines or edge differences once cured.

Tips for Best Results:

- Work in **sections no larger than 2–3 sq ft at a time**, especially on larger surfaces.
- Maintain a **wet edge**—avoid letting coating start to dry before blending adjacent areas.
- Apply with **light, even pressure** on the roller—avoid compressing the nap.

Vertical Surface Application

Typical Applications:

- Backsplashes
- Wall panels
- Vertical stone accent features

Tools:

- Pre-wetted ¼" nap roller (from paint tray)
- Optional: foam brush for corners and edges

Steps:

A. Begin coating adjacent to the previously sealed vertical perimeter.
B. Roll from **bottom to top** in even strokes, covering down to the base roll South - North.
C. Follow with light **horizontal passes** (left to right) over the same section to ensure coverage.

Avoid overloading the roller to prevent runs. If drips occur, roll back over them immediately to redistribute sealer evenly.

Blending Tips:

- If coating begins to flash or dry in one section, blend quickly into it with fresh coating.
- Use **foam brushes** for tight corners, under-hangs, and seam areas for best control.
- Re-roll the **entire section lightly** after completing each zone for uniform appearance and texture

Visual Inspection:

Use angled lighting during and after coating to:

- Identify thin spots or holidays (missed areas)
- Detect roller lines or overlaps
- Confirm a continuous, uniform matte sheen without pooling

Summary Checklist: First Coat General Application

Task	Completed?
Coating puddled and spread evenly?	☐
Rolled North–South, then East–West (crosshatch)?	☐
Perimeter and main field blended smoothly?	☐
No visible streaks, drips, or dry areas?	☐
Foam brush used for detailed or tight areas?	☐
Lighting used to inspect surface visually?	☐

Step 4: Back Rolling the Surface

After the initial application of Formula 131, **air bubbles may emerge** as the water-based coating interacts with the stone surface. To ensure a **smooth, uniform finish**, it is essential to back-roll the surface to eliminate these bubbles and fine-tune the appearance before the product begins to dry.

Purpose of Back Rolling:

- **Eliminates air bubbles** caused by outgassing from the stone or mixing
- **Smooths out the finish**, minimizing roller marks or inconsistencies
- **Ensures consistent texture** across the entire surface

GOAL: Achieve a smooth, wet-looking surface that dries to a uniform matte finish with minimal texture or visual defects.

Tools:

- **Dry high-density foam roller** (6" or appropriate size)
- Clean **paper towels** (for wiping the roller frequently)
- Optional: **round-over foam roller ends** (for detailed vertical work)

Timing and Readiness:

Only begin back-rolling when:

- The entire surface has been coated
- The sealer is still **wet** but has begun to level
- There is **no visible pooling** (especially on horizontal surfaces)

IMPORTANT: The back-rolling window is short. Do not delay—begin while the coating is still workable.

Horizontal Surface Back-Rolling

Steps:

1. Use a **dry, clean high-density foam roller**.
2. Begin rolling with **no pressure to very slight downward pressure**.
3. Roll using the **four-direction method**:
    - First: North–South (lengthwise)
    - Second: East–West (crosswise)
    - Then re-roll in both directions a second time for optimal results

This crosshatch pattern helps spread out coating irregularities and eliminates micro-bubbles across the film.

Key Considerations:

- **DO NOT apply pressure** - let the roller "float" across the surface.
- **DO NOT skid** or drag the foam roller with pressure, as it can disrupt the coating and alter the finish texture.
- If bubbles reappear, **continue gently back-rolling** until they're eliminated.

Vertical Surface Back-Rolling

Optional but Recommended for High-Finish Work

Tips:

- Use the **rounded end** of a 6" foam roller for detail work.
- Focus on **edges, corners, and transitions** where blending is needed.
- Lightly touch-up vertical surfaces using a clean, dry foam roller (never saturated).

PRECISION FOCUS: Minimize sealer transfer to nearby uncoated or already-coated areas. Avoid runs by working in light, sweeping motions.

Managing the Foam Roller - Why It Must Stay Dry:

A wet foam Roller:

- Causes **blotchy or inconsistent finish**
- May **drag or distort** the coating surface
- Can **reintroduce air** into the film

How to Manage:

- **Check the roller frequently**: Lightly touch it—if it feels **wet or tacky**, it's time to clean.
- **Wipe thoroughly with a dry paper towel**, rotating as needed to keep the roller absorbent.
- If wetting occurs rapidly:
- This may indicate **too much sealer is being applied**
- Reduce initial application thickness during coating phase

Repeat wiping as **often as necessary** throughout the process.

Visual Indicators of Success:

- Smooth, glassy-wet appearance with **no visible air bubbles**
- No roller lines, no skid marks, no ridges
- Uniform sheen from edge to edge

Summary Checklist: Back-Rolling

Task	Completed?
Foam roller is clean and completely dry	☐
Back-rolled in 4 directions (N–S, E–W x2)	☐
All air bubbles burst/leveled	☐
No skids, pressure lines, or pooling	☐
Foam roller frequently wiped if wet	☐

Step: 5: General Application (Finish Coat)

A uniform second coat—applied while the surface is still wet from the first application—is essential to achieve full protection and even finish. This "wet-on-wet" second coat allows for proper layering without visible seams, reducing the risk of thin spots and maximizing stain and etch resistance.

Key Timing Note:

Apply the second coat immediately after completing back-rolling of the first coat.

- The first coat must still be wet.
- Waiting too long will cause surface tension, poor adhesion, or visible layering lines.

Horizontal Surface Application

Tools:

- Previously used ¼" **nap woven roller**
- Small amount of mixed sealer
- Dry **high-density foam roller** (clean)

Steps:

A. Assess your roller:
   - If the woven roller from the first coat is still **saturated**, there is no need to reload it heavily.
   - Pour a **very small amount** of sealer onto the back-rolled surface or into a small cup.
   - Lightly re-wet the roller as needed to maintain a consistent wet film.

B. Begin **re-rolling over the entire surface**, blending from edge to edge. **Apply just enough to ensure full coverage** - this coat is meant to "lock in" the finish, not flood the surface.

C. Once finish coat has been rolled out:
   - Switch immediately to a clean, dry foam roller.
   - Begin back-rolling in four directions (North–South, East–West x2) exactly as in Step 4.

Note: Vertical edges (e.g., sink cutouts or edge returns) typically do not require a second coat unless the first coat appears visibly thin or incomplete. If needed, **re-roll lightly** using the saturated woven roller, then touch-up with foam roller for consistency.

Vertical Surface Application

Tools:

- Paint tray with coating
- ¼" nap woven roller (from first coat)
- Stir stick for remixing
- Dry foam roller

Steps:

Mixing reminder: Before pouring more sealer into the tray:

A. Thoroughly **re-stir the container** holding the remaining mix.
B. Scrape the bottom and sides with a paint stick to make sure no solids are left behind.
    - Any buildup left unmixed may result in an uneven finish or compromised chemical integrity.

Reapplication Steps:

A. Reload the roller from the tray as needed (light load only).
B. Roll onto the vertical surface **from the bottom up**, lightly blending over the previously sealed area.
C. Follow with light **cross-rolling or feathering** to eliminate lines.

Tip: Use the rounded ends of a foam roller to back-roll vertical surfaces precisely, especially near seams and transitions.

Critical Back-Rolling Reminder: The foam roller MUST stay dry throughout the back-rolling process. A wet foam Roller:

- Pushes excess liquid
- Causes surface distortion
- Traps bubbles and creates patchy texture
- A dry roller **bursts bubbles and smooths the film,** creating an even finish

How to Keep It Dry:

- Continually **wipe roller with clean paper towels** if it begins to feel damp or tacky.
- If wetting occurs **too quickly**, it's a sign that **too much coating is being applied** - adjust roller load accordingly

Final Surface Result Expectations:

If back-rolling is done correctly:

- The surface will appear **uniformly wet and smooth**
- **Air bubbles** will be virtually eliminated
- Once dried, the surface will have a **slightly textured matte finish**

What to Avoid

Issue	Cause	Risk	Solution
Rough finish	Air bubbles left unburst	Uneven feel, more abrasive	Re-back-roll with dry foam roller
Roller drag/skid marks	Pressure or wet foam roller	Visible defects in dried film	Use light touch; wipe roller
Sanding too early	Insufficient curing	Reduced protection	Wait full cure time (per product specs)

Optional Post-Cure Refinement:
If the final dried surface feels **rougher than desired:**

- After full curing, lightly **sand with a 600-grit mesh pad**
- Use a **circular motion**, taking care not to over-sand any single area

Be cautious: Over-aggressive or premature sanding can compromise stain/etch resistance and alter finish uniformity.

Summary Checklist: Finish Coat Application

Task	Completed?
Second coat applied while the first coat is still wet	☐
Woven roller lightly reloaded with minimal sealer	☐
Foam roller stayed dry throughout back-rolling	☐
Applied in four directions (N–S, E–W)	☐
No pooling, streaks, or trapped bubbles observed	☐
Sealer mix re-stirred before reloading tray (vertical only)	☐
Optional sanding only after full cure, if needed	☐

Step 6: Post-Application Curing

Proper curing is critical to the performance and appearance of the Formula 131 sealer. This step outlines what to expect immediately following application, how to assess the surface during the cure cycle, and how to safely perform any finishing or smoothing work. The timeline provided is based on ideal ambient conditions—adjustments may be required depending on environmental variables.

Immediate Post-Application (Within 5–10 Minutes)

What to Expect:

- The surface will begin to **dry down to a matte finish**, starting at the edges and working toward the center.
- The finish should appear **uniform, dull, and free of gloss or pooling**.
- Small bubbles or minor surface irregularities may still be visible - **DO NOT touch** the surface during this stage.

Observe but don't disturb. This is a natural part of the flash-off process.

Early Surface Handling (After ~2 Hours):

Touch Dry Phase:

- At room temperature (≥ 70°F) and low humidity (< 40%), the surface should feel **dry to the touch** within ~2 hours.
- DO NOT place objects or apply pressure to the surface yet.

Optional Finish Blending:

- If surface irregularities (such as slight patchiness, sheen differences, or visual inconsistencies) are observed:
- Light **manual buffing** can be done with an **ultrafine Scotch-Brite™ pad**.
- Use gentle pressure in **circular motions** only over the areas needing blending.

Avoid aggressive rubbing or overworking the surface—this can alter protection levels or leave visible texture differences.

Intermediate Cure & Smoothing (After ~12 Hours):

Partial Cure Milestone (~90% Cured):

- At this stage, surface finishing can begin if desired.

Optional Refinement:

- For a smoother feel or improved tactile uniformity:
- Use a **600-grit open mesh abrasive pad**.
- Rotate the pad in **gentle circular motions** across the entire surface.
- Perform **1 to 2 light passes per area** to reduce any remaining texture.
- Feel the surface with your hand to identify areas that may need additional smoothing.

This step is optional, based on aesthetic preference. The finish should already be fully protective at this stage.

Full Cure Timeline & Usage Guidelines:

Best Practice: Delay placing heavy appliances (e.g., microwaves, air fryers, stand mixers) for 2–3 full days, allowing maximum cross-linking of the coating and avoiding compression marks or gloss spots.

Time After Application	Condition	Allowed Use
2 hours	Dry to the touch	Light visual inspection only
12 hours	90% cured	Optional smoothing or fine buffing
24 hours	Functionally cured	Light-duty use; liquid exposure safe
2–3 days	Fully cured	Return to normal use, including heavy items

Environmental Considerations:

The timing above assumes:

- Ambient temperature ≥ 70°F (21°C)
- Relative humidity ≤ 35–40%

If your conditions vary:

Condition	Effect on Cure	Adjustments
High humidity	**Slows evaporation**	**Extend wait times**
Low temperature (< 65°F)	**Slows chemical reaction**	**Allow 2–4 extra hours minimum**
Good airflow	**Aids water loss**	**Improves cure time**
Poor airflow	**Slows cure**	**Use fans to circulate air gently**

Tip: Curing is a water-loss process. The drier and warmer the air, the faster the coating cures.

Summary Checklist: Curing and Post-Application Actions

Task	Completed?
Observed matte dry-down within 5–10 mins	☐
Touched surface after 2 hours—dry but no pressure applied	☐
Optional: Light buffing with ultrafine pad (if needed)	☐
Optional: 600-grit mesh smoothing after 12 hrs	☐
Delayed heavy object placement for 48–72 hrs	☐
Adjusted cure times for temperature/humidity?	☐

Step 7: Storage and Clean Up

Proper handling of leftover Formula 131 coating and cleaning of application tools ensures both product longevity and optimal future performance. Follow these guidelines carefully for best results.

1. Handling Leftover Coating

- **Reusability:**
  - Mixed leftover coating remains usable for future applications, **provided it is thoroughly re-mixed** prior to use.

- **Re-mixing Procedure:**
  A. Scrape any hardened or settled material adhering to the bottom and sides of the container.
  B. Stir vigorously to fully reincorporate all settled solids back into suspension.
  C. Continue mixing until the material achieves a uniform consistency with no lumps or powder residues.
- **Filtering:**
  - Before reapplying, pass the re-mixed sealer through a fine mesh or paint strainer to **remove any unmixed clumps or debris** that could cause surface imperfections.

2. Tool Cleaning

- **Wet Tools:**
  - Clean rollers, brushes, and other tools **immediately after use** with water to prevent the coating from curing on them.
- **Dried or Hardened Residue:**
  - Soak tools in the **Formula 131 chemical stripper** as needed to dissolve cured sealer, then rinse thoroughly with water before reuse or disposal.
- **Disposal:**
  - Tools that cannot be cleaned may be disposed of in regular trash, as the product contains **no regulated hazardous materials**.

3. Storing Leftover Formula 131

- **Sealing Containers:**
  - Wipe the rim of the container and the inside of the lid clean of any liquid before sealing to prevent the lid from **"gluing shut."**
  - Screw the lid on tightly, then **loosen slightly by approximately 1/8th turn** to avoid excessive vacuum pressure and ease future opening.
- **Storage Conditions:**
  - Store containers in a **cool, dry place out of direct sunlight**.
  - Maintain ambient room temperature (ideally between 60°F and 80°F).
- **Protect from freezing** as low temperatures may damage the product integrity.

4. Additional Tips

- Avoid leaving mixed product unused for prolonged periods as curing and drying will eventually occur.
- Label leftover containers with the date mixed for tracking shelf life.
- When reusing, ensure thorough mixing to maintain performance and finish quality.
- Filter after mixing during transfer to application pour cup.

F131 Sealed Surface Care and Cleaning

Proper cleaning and maintenance of the F131 sealed surface will help preserve its protective qualities and appearance over time.

4. Routine Cleaning

- **Initial Cleaning:**
  - Begin cleaning with **plain water** and a **soft, non-abrasive cloth** or sponge to gently remove surface dirt and debris.
- **Mild Detergents:**
  If additional cleaning is needed, use **liquid, non-abrasive, non-alkaline dish soaps** diluted in water. Recommended products include:
  - Dawn Platinum
  - Formula 409 All-Purpose Cleaner
- **Cleaning Procedure:**
  - Wipe the surface gently without scrubbing.
  - Rinse thoroughly with clean water to remove any soap residue.
  - Dry with a soft cloth to prevent water spots.

5. Cleaning Methods to Avoid

- **Abrasive Tools:**
  - Do **not** use scouring pads, steel wool, or abrasive scrubbers that can scratch or dull the surface.
- **Magic Eraser:**
  - Avoid Magic Erasers as they can alter the surface finish, causing burnishing effects or unwanted sheen spots/streaks.
  - **Harsh Chemicals:**
  - Do **not** use cleaners containing ammonia, bleach, acetone, or other strong solvents unless they are rinsed off **immediately and thoroughly** to prevent damage.

6. Maintenance and Surface Repair

- **Minor Surface Blemishes:**
  - To remove light scuff marks or sheen changes caused by daily wear, gently rub the affected area with an **ultrafine abrasive pad** until the blemish blends with the surrounding finish.
- **Regular Maintenance:**
  - Maintain surface luster and protection by applying a **household Granite and Stone Clean & Shine product weekly**. This helps refresh the surface without compromising the sealer.
- **Spot Repairs:**
  - If the sealer is compromised due to scratches or coating defects, use the **Formula 131 spot repair procedure** to restore protection and uniform appearance.