



HOW TO DIY CERAMIC COATING

A no-nonsense field guide to correcting, prepping, and coating your paint the right way — and every step that needs attention so that nothing goes wrong.

MORE THAN CLEAN. PROPERLY PROTECTED.

A Guide by Clean Car Custom Detail

Before You Touch the Paint

Let's get one thing straight: ceramic coating is not a product you apply. It's a process you execute. The bottle of coating is maybe 30% of the outcome. The other 70% is everything that happens before it — the wash, the decontamination, the correction, the prep, the environment. Mess up any one of those, and the nicest coating on the market will lock in swirls, trap contamination, most commonly fail early.

This guide is going to walk you through the entire process the way it needs to be done — not the shortcut version you see in a 60-second video. And at every point where a rushed or heavy-handed step can cost you your clear coat, your finish, or your money, we're going to stop and flag it. Hard.

Read the whole thing before you buy a single product. If at any point this feels like more than you want to take on yourself, that's not a failure — that's exactly why professional installers exist. We'd rather you know the real process and choose us on purpose than find out the hard way what "knocking down" a coating means.

The Two Ways This Goes Wrong

- Too aggressive, too early — Compounding paint that didn't need it, or correcting with too much cut and speed, thins your clear coat and can burn straight through it. That damage is permanent.
- Too much, too fast at the end — Applying ceramic coating heavy and not leveling ("knocking down") the excess before it flashes leaves high spots, streaking, and a hazy, uneven finish that may require cutting the coating back off to fix.

Everything in between those two mistakes is where a proper install lives. Let's walk through it.

Supplies You'll Need

Wash & Decontamination

- pH-neutral car wash soap
- Two wash buckets with grit guards (two-bucket method)
- Wash mitt (microfiber or lambswool)
- Iron remover / fallout remover spray
- Tar and adhesive remover
- Clay bar or clay towel + clay lubricant
- Pressure washer or strong hose nozzle

Inspection

- Paint thickness gauge (non-negotiable — see Step 2)
- LED inspection/swirl-finder light
- Trim/paint tape for masking

Paint Correction

- Dual-action (DA) polisher — NOT a rotary buffer for beginners
- Cutting compound, polishing compound, and finishing polish
- Assorted foam or microfiber cutting/polishing/finishing pads
- Pad cleaning brush and pad conditioner
- Microfiber towels (correction-only set, never reused for coating)

Panel Prep & Coating Application

- Isopropyl alcohol (IPA) panel wipe, diluted per coating manufacturer's instructions
- Lint-free coating prep towels
- Ceramic coating kit (applicator suede/block + coating bottle)

- High-nap or plush leveling/buffing towels (dedicated, never used for anything else)
- Nitrile gloves — coatings bond to skin and are difficult to remove
- Respirator or well-fitted mask rated for VOCs (coating fumes are not something to breathe casually)
- Safety glasses

Environment

- A closed garage or bay — no direct sun, no wind, no dust
- Bright, even lighting (multiple angles — coating streaks hide under single overhead lights)
- Thermometer/hygrometer to confirm temperature and humidity are within the coating's spec

The Step-by-Step Process

STEP 1: Wash & Decontaminate

Wash the entire vehicle using the two-bucket method and a pH-neutral soap. Follow with an iron remover (watch it bleed purple as it dissolves embedded metal particles) and a tar remover on any tar spots. Finish with a clay bar or clay towel across every panel until it glides with zero drag. This step removes anything sitting on top of the paint that could get trapped under the coating or dragged through it during correction.

⚠ DANGER ZONE — Skipping decontamination

- Bonded contaminants (rail dust, industrial fallout, tar) left on the surface get dragged across the paint by your polishing pad — creating new micro-scratches while you're supposedly fixing old ones.
- Anything left on the surface gets sealed permanently under the coating. There is no removing it afterward without stripping the coating back off.

STEP 2: Measure Paint Thickness Before You Correct Anything

Use a paint thickness gauge on every panel and log the readings. Factory clear coat is typically only 1.5–2 mils (roughly 40–50 microns) thick, and it does not grow back. This reading tells you how much room you actually have to correct — and where you have almost none, like edges, high points, and any panel that shows a suspiciously low reading (a sign of prior repaint or thin factory application).

⚠ DANGER ZONE — Skipping the paint thickness check

- Correcting blind means you have no idea how much clear coat you're removing or how much is left.
- Burn-through (cutting completely through the clear coat down to base color or primer) is not repairable by polishing — it requires a repaint of that panel.
- Edges, character lines, and body seams are almost always thinner than the panel face and burn through first, often before you'd expect trouble.

STEP 3: Paint Correction — Compound, Polish, Finish

Working one panel at a time, use a dual-action polisher with the least aggressive combination of pad and compound that removes the defect, then step up only if needed. Keep the polisher moving at all times, use light-to-moderate pressure, and let the machine and product do the cutting — not your arm weight. Follow compounding with a finer polish to refine clarity, and check your work under an LED light at multiple angles before moving on.

⚠ DANGER ZONE — Too aggressive correction (this is the big one)

- Using a rotary buffer, too aggressive a pad/compound combination, too much pressure, or too much dwell time in one spot generates excess heat and removes clear coat faster than intended.
- Working edges and raised body lines the same way you work flat panels is one of the most common ways to burn through — these areas already have less clear coat to begin with.
- Over-correcting can create holograms (fine circular haze from too-aggressive compounding) that then have to be corrected out again, removing even more clear coat in the process.
- There is no undo. A burned-through panel needs to be repainted before any coating can go on it.

STEP 4: Panel Wipe / IPA Prep

Immediately before coating — not hours before — wipe every panel down with a properly diluted isopropyl alcohol solution using clean, lint-free towels. This strips any polishing oils, waxes, or residues left behind from correction so the coating is bonding to bare, clean clear coat, not a film sitting on top of it.

⚠ DANGER ZONE — Skipping or rushing the panel wipe

- Coating applied over polish oils or residue will fisheye, streak, or bond unevenly.
- Poor bonding leads to premature coating failure — peeling, patchy hydrophobic performance, or the coating wiping off entirely within weeks.

STEP 5: Mask & Stage the Environment

Tape off trim, emblems, badges, and panel gaps you don't want coating pooling into. Move the vehicle into a closed, dust-free space with no direct sunlight and no airflow, and confirm temperature and humidity fall inside the coating manufacturer's listed range. Set up bright, angled lighting so you can see reflections across the full panel, not just straight-on.

⚠ DANGER ZONE — Wrong environment

- Direct sun or a hot panel causes the coating to flash (start curing) far faster than you can work it, leaving lap marks and high spots that can't be worked back out.
- Dust, pollen, or airflow in the workspace lands in wet coating and cures in permanently.
- Poor lighting is the single biggest reason people miss high spots and streaking until the coating has already cured.

STEP 6: Apply the Coating in Small Sections

Apply a few drops of coating to the applicator and work one small section at a time — roughly a 2x2 foot area, smaller on vertical panels. Spread it in a controlled cross-hatch pattern (side to side, then up and down) in a thin, even layer. Move to the next section before the previous one has had time to flash.

⚠ DANGER ZONE — Applying too much coating or covering too large an area at once

- A heavy or uneven layer will not level out on its own — it dries as high spots, streaking, and blotchy, uneven gloss.
- Trying to cover too large a section means the first part you applied starts flashing before you've even finished spreading it — you lose the window to level it.

STEP 7: Level the Coating — "Knock It Down" — Before It Flashes

This is the step that determines whether your finish looks professional or ruined. Watch the section you just applied for the coating manufacturer's specified flash time (often 1–5 minutes, but check your product — this varies). As soon as it flashes (you'll see a faint rainbow/oily sheen appear), immediately buff off every trace of excess using a clean, dedicated high-nap microfiber towel with light, even pressure, flipping to a clean section of towel frequently. The goal is zero visible residue and a fully level, uniform layer — not a thick film.

⚠ DANGER ZONE — Not knocking down the coating properly (the second big one)

- Leaving excess coating on the panel — even a thin extra film — cures into permanent high spots, streaking, and a hazy or cloudy finish.
- Waiting too long to buff (letting it flash too far past the window) means the excess has already started to harden and can no longer be leveled by wiping — it has to be mechanically polished back off, which means re-correcting the coating (and potentially the paint underneath it).
- Using a dirty or saturated towel to buff just redeposits coating instead of removing it, creating streaks that read as smears once fully cured.
- This mistake is the #1 reason DIY ceramic coatings look worse than a good wax job. The coating itself isn't the problem — an unleveled application is.

STEP 8: Repeat, Then Inspect Under Real Light

Work section by section around the entire vehicle using the same apply-flash-level sequence. Once finished, inspect the entire car again under angled LED lighting, checking for any missed high spots, streaks, or hazy patches while the coating is still workable enough to address (per your product's window — some allow a light second pass, most do not once fully cured).

STEP 9: Cure Time — Leave It Alone

Move the vehicle to a climate-stable, enclosed space and leave it completely undisturbed for the manufacturer's full cure window — commonly 24–48 hours before any light exposure and up to 7 days before the first wash, but this varies by product. Do not drive it, cover it, or let it get rained on during this window.

⚠ DANGER ZONE — Disturbing the cure

- Water contact (rain, sprinklers, even heavy dew) before the coating has cured can cause water-spotting that etches into the coating itself, not just sitting on top of it.
- Dust or debris landing on an uncured coating bonds into the surface permanently.
- A car cover placed too early can imprint texture into a still-soft coating.

STEP 10: First Wash & Ongoing Care

Once the full cure window has passed, hand wash only, using a pH-neutral soap and the two-bucket method — no automatic car washes with brushes, ever. Avoid waxes, sealants, or "boosters" layered on top unless they're explicitly designed to be coating-safe, since some products will strip or interfere with the ceramic layer.

Quick Reference: Where DIY Coatings Go Wrong

- Skipping decontamination → trapped contamination, early failure
- Correcting without checking paint thickness first → risk of burn-through
- Too aggressive compound/pad/pressure, especially on edges → clear coat burned through, not repairable by polishing
- Skipping the IPA panel wipe → poor bonding, trapped contaminations, early failure
- Wrong environment (sun, heat, dust, humidity) → flash marks, contamination baked in
- Applying too much coating at once → high spots, streaking that won't self-level
- Not knocking down the coating in time → permanent haze, streaks, requires mechanical removal to fix
- Disturbing the cure early (water, dust, covers) → etching and surface damage

None of these mistakes are dramatic in the moment — they're quiet. You often won't see the real result until the coating fully cures a day or two later, which is exactly why they catch DIYers off guard.



IF YOU HAVEN'T DONE THIS BEFORE, IT MAY FEEL LIKE A LOT

That's because it is. A proper ceramic coating install is measured, tested, and controlled at every stage — which is exactly what we do, every day, on every vehicle that comes through our bay.

We've got your back. If you'd rather hand it off to someone who checks paint thickness before they pick up a polisher, and knocks down every panel by hand — we're here.

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