

TRUE GEL COAT vs. TWO-PART EPOXY PAINT

Why Genuine Gel Coat is the Superior Choice for Fiberglass Pool Step Repairs

A practical guide for pool owners and professionals explaining the real differences between common pool coatings and true gel coat — and why it matters on high-wear areas like steps.

1. Understanding Pool Coatings

Not all “pool paints” are the same. Different chemistries serve different purposes. Choosing the wrong product on fiberglass steps leads to premature peeling, blistering, and expensive re-work. The key distinction is whether the product is a surface coating that sits on top of the material, or a true resin system that becomes part of the structure.

2. Common Types of Swimming Pool Paint

Type	Typical Lifespan	Key Characteristics	Best Used On
Two-Part Epoxy	5–8 years	Hard, glossy, excellent chemical & abrasion resistance. Two-component system that must be mixed. Builds thicker film than acrylic.	Bare concrete, plaster, gunite, and properly prepared fiberglass
Chlorinated / Synthetic Rubber	2–5 years	Flexible, single-pack, easier application. Softens and fades faster. Strong solvents.	Previously rubber-painted surfaces; some concrete/plaster
Acrylic (Water-Based)	1–3/4 years	Easy to apply, can go over damp surfaces or mixed prior coatings. Least durable option.	Quick cosmetic repaints, decks, uncertain existing coatings

Critical rule: Always match the existing coating type (or fully remove it). Putting epoxy over rubber (or vice versa) almost always causes delamination.

3. Tub / Spa Paint and Tile Paint

Tub and spa paints are specialized systems (usually epoxy or acrylic) formulated for acrylic, fiberglass, or porcelain bathtubs and spas. They focus on adhesion to smooth non-porous surfaces and resistance to hot water and milder chemicals. They are generally thinner films and are **not optimized** for continuous outdoor chlorine immersion, heavy UV, or the high foot traffic of pool steps.

Tile paints / coatings are thin decorative or protective films meant for ceramic or porcelain tile. They emphasize adhesion to glazed surfaces and appearance rather than building a thick structural barrier. They are unsuitable as a primary finish for fiberglass pool steps.

4. What Is True Gel Coat?

Gel coat is a thick, pigmented polyester (or vinyl ester) resin that is the original outer surface of almost all fiberglass pools, spas, and steps. During manufacturing it is sprayed into the mold first; the structural fiberglass laminate is then built behind it. Once cured, gel coat is an integral part of the structure — not a paint film sitting on top.

Key properties that matter for repairs:

- Applied thick — typically 15–30+ mils dry film thickness
- Chemically bonds to the underlying polyester/vinyl ester resin system
- Provides the smooth, glossy, waterproof, UV-resistant, and chemical-resistant factory finish
- Can be color-matched, sanded, and buffed for nearly invisible repairs
- Designed from the start for continuous water immersion and chlorine/salt exposure

5. Why True Gel Coat Is Used for Step Repairs

Fiberglass pool steps experience concentrated wear: constant foot traffic, cleaner abrasion, toys, and continuous immersion. When steps crack, blister, delaminate, fade, or become rough, the correct sequence is:

1. Structural repair first (grind to solid material, fill voids/cracks with compatible resin + fiberglass reinforcement or marine-grade filler, sand smooth).
2. Finish with true gel coat (color-matched where possible) so the repaired surface once again has the same chemistry, thickness, and protective properties as the original factory surface.

Ordinary pool paints — even good two-part epoxies — remain a surface coating. On high-wear steps they are more prone to eventual peeling, wear-through, and a finish that never quite matches the surrounding original gel coat.

6. Head-to-Head: True Gel Coat vs. Two-Part Epoxy Paint

This is the comparison that matters most for fiberglass step repairs.

Feature	True Gel Coat	Two-Part Epoxy Pool Paint	Advantage
Bonding Method	Chemically fuses with the fiberglass resin system	Sits on top as a surface coating (mechanical adhesion only)	Gel Coat
Film Thickness	15–30+ mils — real protective barrier	Typically 3–8 mils per coat (even multi-coat systems are thinner)	Gel Coat
Expected Lifespan on Steps	Often 10–15+ years when properly applied	Typically 5–8 years (can be shorter on high-wear steps)	Gel Coat
Peeling / Blistering Risk	Very low — becomes part of the structure	Higher — water can migrate underneath and lift the film	Gel Coat
UV & Chemical Resistance	Engineered with UV inhibitors for continuous immersion	Good chemical resistance but fades and chalks faster over time	Gel Coat
Finish Quality	Factory-like gloss, smooth, color-matched to original	Painted appearance that can look and feel different from surrounding gel coat	Gel Coat
Repairability & Blending	Can be sanded, buffed, and blended almost invisibly	Harder to blend; often shows as a distinct patch	Gel Coat
High-Wear Performance (Steps)	Handles foot traffic and abrasion far better	More prone to wear-through and edge chipping on steps	Gel Coat

Why Gel Coat Wins on Steps — Five Key Reasons

1. It becomes part of the step, not just a coating on top.

Epoxy paint sticks to the surface. Gel coat chemically bonds into the same polyester/vinyl ester resin family the steps were made from. That is why original factory gel coat lasts so long — and why a proper repair restores that same integrity.

2. Much thicker protective barrier.

Steps take a beating from feet, toys, cleaners, and constant water. A thin epoxy film wears through faster. Gel coat's greater thickness delivers real abrasion resistance and better protection against osmotic blistering.

3. Longer real-world life on high-traffic areas.

Many epoxy paint jobs look good for a few years then begin peeling, chalking, or blistering — especially on steps. Quality marine-grade or polyester gel coat repairs commonly deliver 10–15 years of service when applied correctly.

4. Better match to the original surface.

Fiberglass steps were manufactured with gel coat. Using gel coat again keeps hardness, flexibility, sheen, and color consistent. Epoxy can create a different feel and appearance that stands out.

5. Lower long-term cost.

Even though gel coat work costs more up front, you avoid the cycle of stripping failed epoxy and repainting every 5–7 years. One proper gel coat repair often outlasts multiple epoxy jobs.

Simple Way to Explain It to Customers

“Epoxy paint is a good surface coating — it sits on top of the steps. True gel coat becomes part of the steps. That’s why we use real gel coat for our repairs. It bonds deeper, lasts longer, and gives you a finish much closer to when the steps were new.”

Bottom Line for Professional Step Repair

Use true gel coat (or a high-quality compatible marine-grade / polyester gel coat repair system) for the final surface on fiberglass steps after structural repairs. Reserve two-part epoxy pool paints for concrete or plaster pools, or for full-pool refinishing jobs where a gel coat system is not practical. Avoid ordinary tub and tile paints on pool steps — they lack the thickness, immersion durability, and bonding characteristics required.

Proper surface preparation (cleaning, grinding/sanding to solid material, and ensuring the surface is dry) remains critical no matter which product is chosen. The best coating in the world will fail if applied over contamination, soft laminate, or moisture.

Step Doctors of the Carolinas • Specializing in Fiberglass Pool Step & Surface Repair
Professional structural repairs finished with true gel coat systems for lasting results.