



How to prep fiberglass parts prior painting

So you did your homework, shopped around, and decided on a fiberglass body for your next project. Cool. But you don't want your car to wind up looking like a dune buggy or a boat hull, right? You want the smooth, sleek look of steel.

No problem. The trick to great paint on fiberglass, as well as on any other surface, is proper prep. You know—applying just the right amount of filler, blocking a guide coat to check for low spots, that sort of thing. In a lot of ways, prepping fiberglass is just like prepping metal. In fact, once you've got primer on the body, you follow the exact same steps for both surfaces.

With fiberglass, however, the procedures before priming are quite different, because the material is so very different. Understanding what fiberglass is and coping with its quirks are the first steps toward giving fiberglass a finish that looks like sheet metal.

Proper fiberglass prep starts well before you get out the sandpaper. It really begins when choosing the body itself. As you've probably figured out, there is a huge number of companies that manufacture fiberglass bodies. Unfortunately, there are probably as many levels of body quality as there are body suppliers. Here are some key qualities to help you sort them out.

Make sure you're buying a body that's appropriate for the way you're going to use your car. If you're building a street car, don't buy a race car body, and vice versa. Race car bodies typically have panels that are much thinner to cut off some weight, but the tradeoff is a drop in durability. Stone chips, for example, will wreak havoc on a race car body.

Look for a body that's made of hand-laid fiberglass. That means fiberglass mats were laid on top of the gel coat in the molds, which ensures uniform panel thickness no matter which way the panels bend or crease. If the fiberglass was shot onto the gel coat using a chopper gun, there's no guarantee of uniformity, especially in the curves and corners. (Chopper guns are best used for broad, flat surfaces, like boat hulls.) It's also harder to maintain a uniform amount of resin when using a chopper gun. Too much resin in the fiberglass makes the panels brittle.

Speaking of resin, check if your body manufacturer uses tooling resin or general-purpose resin in the molds. Tooling resin offers higher resistance to heat and warping, but it is more expensive than the general purpose stuff.

Some other buying tips: Shop for a body that's as complete as possible - with doors and door hardware, a grille, window rubber, and so on - to ensure every panel and component fits perfectly. Some companies send their body kits out "hung and latched," so you don't have to worry about properly fitting the doors, hood, and trunk lid. Others sell rolling chassis that are designed for a precise fit under their body kits. Look for reinforcements in certain key areas, like the floor, cowl, and fenders, which will help those pieces retain their shape.

Once you have your body, assemble it in the raw gel coat and let it sit out in the sun and cure. The sun's heat will work out air bubbles in the resin, so they won't cause problems when you paint. The heat will also tighten up the fiberglass, which can affect panel fit, so you don't need to do any trimming or shimming of panels when you assemble the body at this stage. This tightening of the fiberglass also gives the panels a "memory" of how they fit together, so they'll go back together more easily after you've taken them apart to paint them.

How long should you cure the body? "The longer the better," is the consensus among the experts. The minimum time mentioned is 48 hours, while others say it should cure for weeks, maybe even months, especially if the car will be finished in black or another dark color. Since dark colors absorb heat, you don't want the heat to bring more bubbles out of the resin, or cause the panels to warp or shrink, after the paint is on.

After the curing process is complete, it's time to check the body panels, fenders, doors, and other components for a proper fit. As Dennis Taylor (of Dennis Taylor's Reproductions) says, "Fiberglass bodies were never assembled in Detroit, so you can't just assume the panels will fit." Coming from a body manufacturer, that's remarkably candid. Some manufacturers claim that their bodies will almost fall together and require barely a scuffing before paint. The painters, however, tell a different story. "They all need some help," says SoCal Speed Shop's Mick Jenkins. And if you didn't assemble the whole body before curing, do so before sanding and priming. "Don't just hang the doors and assume everything else will fit," Jenkins says. "Some parts may fit better than others."

Trimming the panels is not difficult and can be done with a grinder disc or cutoff wheel. Be sure to protect yourself, as fiberglass dust is nasty stuff. Wear eye protection mask, so you don't inhale the fiberglass dust, and cover your skin with long pants, sleeves, and gloves, or you'll be itching for days to come.

If you have to use shims to properly gap an area—to fit the doors, for example—keep in mind that because of fiberglass' flexibility, shimming in one place may throw off the gap somewhere else. There's action and reaction, so be careful.

There are a couple of ways to fix a part that's too small. You don't necessarily need to get out the glass cloth and resin; Marson's Marglass or Evercoat Kitty Hair will fill in a small area. However, if the fit is way off, you may need to cut the panel in half and add a fiberglass section to the middle. This can get complicated. Not only do you need to pay attention to exactly how much material you're adding - so the part doesn't get too big - but you also have to make sure the entire panel retains its shape. You may need to build a buck to maintain the curve of a door, for example.

To avoid this kind of reshaping, experts advise not scrimping on the purchase of the body.

You get what you pay for. Spending a few extra bucks up front should keep you from having to do major fiberglass work to get the parts to fit.

Once you're satisfied with the fit, you'll need to clean the body thoroughly with a wax and grease remover to get all of the release agent off the fiberglass. If the body is not clean, those agents will create fisheyes in the paint.

Now it's time to start sanding. Before you begin, be sure the body panels are well supported, otherwise you risk changing their shape by pushing on them with the sanding block.

One of the nice things about fiberglass bodies is that their gel coat finish acts like an initial guide coat. Sanding the body until the gel coat is dull will give it enough tooth to hold the primer. It will also show off any low spots in the panels, as they will remain glossy when the surface around them is dull. Most of the painters recommend using 80-grit sandpaper for the first go-around, though some say you can start with 150- or even 220-grit, depending on the quality of the gel coat surface. When you're working on large flat areas, like door skins, experts recommend using a long board to sand an even surface across the body panels. If the car's body has too many curves to use a long board, a rubber sanding block will help conform the sandpaper to the panel shapes.

Two warnings about sanding gel coat: Use caution so you don't sand through the gel coat layer, as that might open pinholes in the fiberglass that will later erupt, volcano-like, through the paint. Also, do not wet-sand the bare gel coat. It's porous and may trap water that will later blister the paint.

There are a couple of ways to treat low spots in the fiberglass. One is to use standard body filler or glazing putty. Filling primer can also do the trick. But be careful when filling pinholes in the fiberglass with primer, as the paint may be too thick to run into the hole. Instead, force some filler or putty into the hole with your finger, then knock off the excess with a second sanding pass. If you've made the first pass with 80-grit, go to a 180- or 220-grit to smooth the filler and any scratches created by the 80-grit. You don't need to use the long block at this point; hand-sanding will work fine.

When it comes to shooting primer, each painter has his or her own favorite type of paint and method of painting. Most take the body apart and painted the parts separately. All say any sort of urethane or epoxy primer would work, though they do recommend staying away from etching primers, as the etching chemistry isn't compatible with fiberglass. Many experts say you shouldn't mix primers and paints among the various paint company's systems. Start and finish with one system, like PPG's Global System, for best results. Once the first primer coat is on the body, the remaining paint steps are identical to what you'd do with sheet metal.

Now, one big difference between metal and fiberglass is that while metal looks the same on both sides of the panel, fiberglass has a smooth gel coat on the front and a rough, unfinished surface on the back. Experts have some interesting ways to treat the rough sides.

Pete Santini and Kustom City's Scott Holton use Line-X, a brand of spray-on bed liner, to finish the undersides of fenders. The protective layer adds durability to the fiberglass, and the black rubbery material looks just fine in the fender wells. Holton uses the Line-X material on the inside of a Willys coupe body as well, as it covers the raw fiberglass and cuts down on the fiberglass' pungent aroma.

One of Dennis Taylor's tricks for making a fiberglass body look like steel is to finish the parts of the car that are rarely seen, but that would immediately reveal the car's fiberglass identity if spotted. His main targets are the rough areas on the backside of the hood and trunk lid. They don't require the same kind of finesse that the body panels do, but some attention makes a world of difference. He knocks down the rough edges and parting lines with a 24-grit grinder; covers the area with Rage body filler;

block-sands with 36-grit paper; adds a second, thinner layer of Rage; then blocks again with 80-grit paper. He says this is a better way to finish these areas than to just pour in resin or gel coat, as these materials by themselves can get brittle.

There you have it. Prepping fiberglass isn't much trickier than prepping metal. Just take care to cure, fit, and sand the raw panels properly, and you'll have a finish you can be proud of.