

PlasticWorks: Fiberglass Deck FAQ and Tips and Tricks

Q: Can I apply fiberglass over my existing deck coating?

A: If you have a solid deck coating, such as paint, vinyl, duradek, ducan, or a similar product that covers the bare wood of the deck then you must remove the existing coating (and adhesives underneath) and repair any damaged areas in the plywood before recoating with fiberglass. If the deck is solid and in good condition, it is possible to screw another layer of thinner plywood (1/2" or even 1/4") through the old deck surface and then apply the fiberglass to the new layer. This assumes that the additional height would not cause any other issues like going higher than sills etc.

If your deck is plank deck with gaps, you will also need to place new plywood down to give the fiberglass a solid surface to adhere to. Because of possible flexing of the planks, it is recommended that at least 5/8" plywood is used. An additional consideration with converting plank type decks to solid surface decks is drainage. As you apply the plywood, you will also need to shim or otherwise slope the deck away from the house to an appropriate edge for drainage. If you do not do this you will end up with pooling water that needs to be removed with a drain system. Its possible to do that but less work if you plan the drainage out before you put the plywood down. For drainage, first let a few rains show you where the water pools. Then drill a hole through the deck and insert a fiberglass tube through the deck (you can make one using a pipe covered in wax paper and then coated with glass and resin. You'll need to tie the tube into the deck to keep everything waterproof. Finish on top as required.

Q: How do I achieve a non slip finish?

A: We recommend adding finely crushed walnut shells to the gelcoat before applying the gelcoat to the deck. Walnut shells work well because they are textured but are still light and will float suspended in the gelcoat for an even coverage over the whole deck. Other materials like sand can be used but often sink to the bottom of the gelcoat can, which can lead to either constant stirring or an uneven finish.

Q: Do I need to add a non slip finish?

A: Adding a non slip finish to your deck is a matter of personal preference and the safety of your guests. When a fiberglass deck is first laid down it will be quite slick due to the wax that is in the final coat. This wax will wear off over time with use and the deck does have some texture due to the fiberglass fibers under the gel coat. You can, with some extra work and cost, add the non slip additive after you had built the deck but it would be very difficult to remove the non slip if you decided it was not necessary.

If you have children that run or elderly users of your deck then at least a bit of non slip is a good idea. A little will go along way so be careful about adding too much or the finish may become too rough for bare feet. We recommend a small palm full for every gallon.

Q: What are the available colours?

A: We offer Grey and Beige as pre mixed colours for decks. For custom colours, pigments are available but mixing is on a DIY basis. Overall we sell only about 1-2 decks a year that are using custom colours. About 80% of the balance go with Grey and about 20% with Beige.

Q: How long will a fiberglass deck last?

A: Your fiberglass deck will likely last over 15 years with little need for major maintenance and we regularly hear of decks that are just getting minor repairs that are over 45 years old. The common issues that we see are cracking due to settling of the deck or poor deck construction.

Maintenance for your deck includes yearly or twice yearly cleaning (a pressure washer works well) and checking for any cracks in the deck surface or any gaps/cracks in weak spots like railing posts. If the gelcoat becomes discoloured over time it is an easy project to recoat the deck and make it look new again.

Q: My gelcoat (topcoat) is faded and stained – what can I do to refinish it?

A: Assuming a good pressure washing hasn't helped, you can re apply the gelcoat finish after a light sanding of the deck .

Q: What tools do I need for fiberglassing a deck?

A: The tools you need you will likely already have if you are someone thinking about this project. You will need a screw gun, scissors, utility knife, hammer, paint rollers and chip brushes, putty applicator, and some mixing containers. Specialized rollers are available for fiberglass work but are not generally used for decks as decks tend to be easy, flat surfaces. We would be happy to go over the uses of the specialized tools but most DIY's apply the deck with only a paint roller and brush. We do strongly suggest getting a new heavy duty roller cage as you will be putting on a fair amount of pressure as you roll. The best optional tool is a small bubble buster roller.

Q: Can I use metal drip edge flashing?

A: For drip edge we do not recommend metal flashing. Metal heats up in the sun a lot faster than fiberglass and expands and contracts at a different rate. Over time this will cause the fiberglass to crack only at the edge of the metal, much like a fault line. For that reason we recommend either fiberglass drip edge (which we sell) or rounding over the corner of the wood to make a built in drip edge. Metal drip edge will not fail immediately but plan on repairs in a few years if you do not replace metal with fiberglass.

On the tie in to the house, metal flashing works great because it is screwed in and caulked and not directly attached to the fiberglass.

Q: Do you have installers?

A: Yes, we have outside installers that we can recommend.

Q: Is there a guarantee?

A: As this is a DIY product we are not able to offer a guarantee on the deck though we are happy to address any issues you might have with the materials we provide.

Q: I have a crack. What happened and how can I repair it?

A: Cracks are caused by too much flex in the deck in one area, repeatedly and over time. They often show up along seams and are often caused as the deck posts settle. They can also be signs that the seams on the deck were not filled or that the plywood was too thin and allowed the deck to flex too much. Before you repair the crack you should assess what may have caused the crack on your deck and try to fix the cause before you fix the deck. If the cause is settling, just repair the crack and hope that most of the settling is done. Other failures may be due to bubbles or foreign objects in the original surface.

Repairing a crack is a straight forward process. Find the start and finish of the crack and grind down the fiberglass to the plywood starting a few inches into the undamaged deck on either end of the crack and an inch or 2 back from either side of the crack. Your grinding should taper the fiberglass layer from the surface gelcoat to the plywood. You then take a strip of mat to match your trough, feather the edges to allow for the taper (ie pull some of the mat's strands out to reduce the thickness) and reapply resin to the mat, sand the patch flush with the existing deck and finally re gelcoat that section to match. The result should be a seamless repair. Often, customers will choose this time to re gelcoat the entire deck as it eliminates the possibility that the new bright gelcoat will not match the old and possibly faded gelcoat.

Q: What weight of Mat do you use?

A: We can sell you either 1oz mat, 1.5 oz mat or even 2 layers of 1oz! Most decks by DIY'ers or professionals use one layer of 1.5oz mat. What does that mean? It means that there is 1.5oz of fiberglass per square foot. If you're confused about why it seems heavier than cloth but is labeled lighter it's because cloth is based on weight per square yard for reasons that hopefully made sense at the time!

Q: How can I attach railings?

A: There are 2 options:

1st: You bolt the posts on to the fascia with lag bolts. You may need to trim off the lip of the drip edge flashing (if used) and or shim the post to match with the edge of the deck. Any seams that result can be caulked. Just make sure to inspect the caulking every few years.

2nd: You can bolt through the deck and seal the holes as if it were a boat (i.e. filling the holes with marine bedding compound and then attaching the bolts and caulking the base.

Q: How do I fiberglass stairs?

A: Usually stairs are left uncoated as they can be more easily repaired or replaced and flex a lot. Landings can be coated if desired.

Q: How to I tie in the deck to the house?

A: On houses with plank or vinyl siding, the lowest board may be removed and then replaced after the deck is installed. For all other houses we recommend a strip of flashing that covers the cant strip and allows a bead of caulk on top.

Q: How low of a temperature can I work with fiberglass in?

A: In theory, quite low but we recommend trying to stay above 10 degrees C as it reduces the chances that you will run into problems with curing. It also may affect coverage as we have one customer that used a lot more resin than we estimated but he was doing the deck in temperatures of 1-10 Deg. C when it was acting a lot thicker. In Spring, try to ensure that you leave enough time above 10 degrees for the layer you are working on to cure.

Q: How hot is too hot?

A: Just as cold will slow down the reactions of the catalyst and the resin, heat will increase the speed. That speed can be adjusted enough by changing the catalyst ratio to allow for ambient temperature but were a lot of problems can come up with is the surface temperature of the deck if it is in direct sunlight. If the ambient temperature is 30 deg C, the deck's surface temperature could be as high as 40-45 Deg C or higher. This will cause the resin to 'gel' much faster than expected and can result in wasted batches or even hardened lumps of resin on the deck! If you are doing a deck that is in direct sunlight it is best to work in the morning – before the deck heats up or in the evening when the sun's rays are at a weak angle. This is CRITICAL when doing the gelcoat layer as if the wax that is in the gel coat does not rise to the surface but instead is trapped as it cures too fast then your deck will never lose that 'sticky' feeling. Tips that can help are pouring small batches and leaving the pails/mixing area in the shade so that the resin is not too hot before it reaches the deck.

Q: My deck is done, but the gelcoat is still sticky in places. What happened and how do I fix it?

A: Gel coat can be sticky for 2 reasons. 1 is that you under catalyzed the gelcoat. This may mean it will take longer to cure (sometimes much longer). This is the problem if your gelcoat is both soft and sticky. You can sometimes fix undercatalyzed gelcoat if you catch it right way by applying a second over catalyzed layer of gelcoat which, as it is applied, will help the layer underneath. If that does not work then you need to remove (ie scrape) the soft gelcoat off and start again – but first give it a week or so to harden just to be sure. This is relatively uncommon.

If the gelcoat is only sticky and not soft then the problem is that the wax in the gelcoat did not rise to the surface. This can happen if there was not enough wax in the gelcoat or if the gelcoat was not agitated to mix the wax in before applying. We specify 'double waxed' for our gelcoats to reduce this possibility. The second and more common reason for a lack of wax is due to the gelcoat curing too fast such as when the deck is in full sunlight. Often we will hear about decks being sticky where the sun was hitting them but hard where the shade was. To fix this, you just need to apply a wax to the surface to seal off the sticky sections from Oxygen. We recommend an acrylic floor wax like Future Floor Wax or an automotive car wax. That should take care of the problem.

Q: Do I need to use screws to secure the deck?

A: No, you can use ring nails or spiral nails but screws are best. Nails were used for a long time, we know because often the repair questions start with 'Well I have some small cracks and some of the nails are popping up'. This is the likely the last deck you'll ever put down at your house so its worth the extra effort to screw it down.

Q: Do I need to use Tongue and Groove plywood?

A: No, it is better but not strictly required. You can fill in the seams of regular plywood. Good one side plywood will also speed things up but is not necessary if you are prepared to fill in any knot holes.

Q: Do I need to catalyze the gelcoat too?

A: Yes but be careful not to over catalyze or you may end up with sticky spots.

Q: Do I have to do it all in a day?

A: No, by all means take your time. A good schedule is to take a weekend, fill cracks, seams and screw holes in the morning, do a dry layout the mat in the midday sun, cut it and mark it and put it aside (keep it clean!). Then in the afternoon, apply the seal coat of resin. This waterproofs the deck in case the weather changes. The next day, layout the mat and apply the resin in the morning, sand and repair and issues in the mid-day sun and then gelcoat it in the early evening. Depending on the size of your deck this may be a 1 day job or a 4 day job. If your time is more broken up than that, just do it one step at a time. Once the deck is sealed, then it will dry off quickly and allow you to fit in the other steps as you have time.

Q: How dry does the plywood need to be?

A: Very dry. About 4 nice sunny days in row sort of dry is ideal. Less in the summer and more in the spring. Moisture can cause delaminating as tries to evaporate through your new deck and that's no fun! You can always tarp the deck to speed drying times in the spring and fall.

Q: Can I stop halfway through?

A: Halfway through the deck is OK but not halfway through a layer. You need to finish each layer you start in the same session to keep the resin from forming a noticable ridge where you stopped.

Q: HELP. I am running out of resin on the mat layer! What do I do and what happened?

A: OK first what to do. If you are doing rows then move one row over and flip it over so that it is folded in half lengthwise. This gives you a firebreak of sorts and then you can finish off the other rows and on to the break. Wetting out the mat to a flat surface may give you a tiny ridge when you restart but it is much better than the mess of half saturated mat that you get when you just run out.

If you are going across rows then you have to attempt to do the same thing. The easiest way is to cut a row or 2 with your scissors (get your helper to help figure out how far your remaining resin will go) and then flip in back and possibly also in half lengthwise.

Once you finish your smaller mat area then you can go and get more resin.

What happened? It is relatively easy to use too much resin as the whole process is easier when you do. On the seal coat you really just want to give the wood a wet look and not pile on the resin thickly. For the mat layer, you have to make sure your mixer (or you) is keeping track of the resin used vs the area you have left. It can go a lot easier when you apply too much resin but you will then run out by the end. You should plan on having a few extra litres for patches and as a margin of error. Our estimates allow for a little extra.

Q: HELP. I am running out of gelcoat

A: You have a few options:

- 1) Add a little resin to extend the gelcoat (max 10%)
- 2) Apply a thinner layer to the rest of the deck
- 3) Pick a line and then gelcoat only that area. Get more gelcoat and finish as soon as possible (if over 6 – 12 hours give a scuff sand to the edge where the new coat will overlap with the previous layer.

Tips and tricks:

Always keep your mixing area in the shade to avoid your materials getting too hot before you add the catalyst. On the filler layer, even tilting your mixing board away from the sun as you apply it can help.

When using autobody filler to fill holes and skim the flashing, you can make the mixture more pliable by adding a tablespoon or two of liquid resin. Harden it with the paste catalyst.

Sweep the deck immediately prior to laying out and laying down the mat.

\$10-20 spent on a bubble buster roller is much nicer than sanding out 20 bubbles and the associated itching.

You can do the mat layer in sections if you flip up a row and fold it lengthwise. You may end up with a little ridge that has to be sanded though.

Allow enough time to fix any issues after you have saturated the mat layer. This is the stage to get as picky as you want for the final decks appearance.

If you think you may be a bit low on gelcoat you can extend it slightly with regular resin (max 10%).