

FIBERGLASSING A PLYWOOD DECK OR ROOF

Fiberglassing a Plywood Deck or Roof. More and more it is becoming popular to fiberglass plywood decks or roofs, and the good news is that most anyone can do it following our directions. First you must decide on materials. You will be using Chopped Strand Mat for your fiberglass and polyester resin for your resin. 2.0 ounce Chopped Strand Mat is adequate for most applications, it will give you a hard-waterproof finish, however if you want to go that extra mile, or if the area is going to be subjected to high traffic or heavy weight usage, we would recommend using two layers of 1.5 ounce Chopped Strand Mat. Roofs that will not be walked on can be done with 1.5 ounce Chopped Strand Mat.

Step One is to calculate how much Mat you will need. (IF YOU JUST SEND US THE MEASUREMENTS OF YOUR DECK WE WILL DO THESE CALCULATIONS FOR YOU E-MAIL THE MEASUREMENTS TO sales@usfiberglasssupply.com) Chopped Strand Mat comes in a 60-inch width, so five feet wide. Therefore, each linear yard is 15 square feet. For our sample deck, we are going to use the measurements of 12 x 25.

A 12 x 25-foot deck will need 300 square feet of material. 300 square feet divided by 15 = 20 linear yards of Mat. You take the square footage of the deck (300) and divide it by 12 to get the number of linear yards you will need for your project.

Next, how much resin? We will do the calculations for 1.5 ounce Chopped Strand Mat and 2.0 Chopped Strand Mat. The rule of thumb is for each square foot of 1.5 you will need 4 ounces of resin. So, our rule of thumb is going to be 4 ounces per square foot for 1.5 ounce, and 5 ounces per square foot for 2.0 ounce. (Remember that the first step is going to be to prime the bare wood deck with mixed resin, this will be explained below. You will need about 1 gallon of resin to prime 200 square feet)

This is how you do the calculations: You take the number of square feet of your deck times the number of ounces of resin. For our 300 square foot deck it goes like this:

For 1.5-ounce Mat $300 \times 4 = 1200$ ounces. Then you divide by the number of ounces by WEIGHT in a gallon. The number of ounces by weight in a gallon is 150. So, 1200 ounces divided by 150 gives us 8 gallons. For 2.0-ounce Mat $300 \times 5 = 1500$ ounces. Divided by 150 = 10 gallons of resin. Just take the number of square feet of your deck times it by either 4 or 5 then divide by 150 to get the number of gallons of resin you will need.

Now what else will you need before getting started? You can get the Chopped Strand Mat and Resin from US Fiberglass Supply, you will also need a couple of Laminate Rollers. Laminate Rollers are not for spreading the Resin, they are for pressing the Resin down, and popping out the air bubbles. They look like 40 little pizza cutters linked together on a Roller. MSS sells these also.

Whenever you are not using laminate rollers, and other tools that come in contact with the Resin, keep them soaking in acetone, this will make it so you can use them over and over again.

Here are a list of things you will need to get to make your job easier:

- Acetone
- Rubber Gloves
- Eye Protection
- Respirator
- 1.5 Gallon plastic mixing buckets, marked of in quarts – Paint stirrs
- Plastic squeegees, such as disposable mud knives 8”, and some smaller disposable putty knives. These will be used to spread the resin.
- Mini Disposable paint rollers 4 inch
- Full size disposable paint rollers

Now to get started.

SEAL COAT: Before laying down the Mat you will need to seal the plywood with Resin first. The plywood must be bone dry, any moisture at all will stop the resin from soaking in, and you will have wasted your time and money. Sweep or blow off any dust from the deck.

In this step you mix the resin with the hardener and roll a coat of it on the dry raw plywood do this before applying the Chopped Strand Mat (the resin is unwaxed leave it that way do not add wax). As soon as it is dry you can go to the next step.

Now, pre-cut your pieces of mat to fit your deck. Once you get going you will not want to stop to do this, so do it ahead of time.

Lay down the first section of mat. Now it must be between 60 and 90 degrees F when you are doing the work. If it is too cold the resin will never set, if it is too hot it will set too quickly. Never work in the direct sunlight.

For your First batch, mix a small amount of Resin, one or two quarts. (You must mix the Resin with a stick for two minutes, or with a power drill attachment for one minute, a complete mixing is very important.) this first batch will give you a feel for the working time of the resin. You will usually have ten to fifteen minutes per batch, so have all your ducks in a row before you add the hardener to the resin. Do not ass the wax to the resin because when you are finished you are going to paint the deck with boat deck paint, or Sherwin Williams Porch and Deck paint. You can also use Marine No-Skid Pain.

Now lay the Mat down like a piece of carpet. Take the resin you have mixed and pour it directly onto the Mat. Gently spread the resin like butter on bread with your hard-plastic spreader. You do not want to move the strands of Mat around, just the resin so be gentle. When an area is properly saturated with resin, it will turn from white to clear. Keep moving the resin from the wet areas to the dry areas. This first batch will give you an idea of your working time, and how much resin you will need to mix each time. Have someone following behind you with a laminate roller pressing down the Mat and getting out any creases or air bubbles.

Before we move on some cautionary notes. Resin builds up heat when it is in the mixing bucket. The more resin, the more heat. The more heat the shorter the working time. So, mix the Resin, and get it out of the bucket ASAP!, or you will end up with a hot bucket of hard resin. Also, Polyester Resin is nasty stuff, you must wear all proper safety equipment, you do not want to get it on your skin or in your eyes, or you will end up with an injury. The fumes are also quite strong, so we recommend a proper respirator.

Back to work. For each section overlap the Mat at least one or two inches to ensure a waterproof deck. Keep laying out the Mat and spreading the resin until the entire deck is finished.

Flashings and overhangs; If you want to run the Mat 4 to 6 inches up the wall to get a waterproof seal, just fold the Mat and rest it against the wall, use a disposable mini roller to toll the resin onto it, and press it down with the laminate roller. The same goes if you want to do a lip around the deck, let the mat hand over edge, bend it down, roll resin on it with the mini roller, then press it down with the laminate roller.

After 24 to 48 hours, apply your deck paint or gel coat. Now you are finished, and if you did it right, it can last anywhere from 20 to 25 years. We have taught several home builders to lay decks by this method, and they have had a good experience with it. It is not that hard to do. If you need help with any of this please call US Fiberglass Supply 352-377-4146