

FORGED CARBON SKINNING

CHOPPED TOW SKINNING STEP BY STEP GUIDE

Key Materials

- XCR Black Epoxy Basecoat ~330g/m²
- CT12 Carbon Fibre Chopped Tow ~4-500g/m²
- R210 Unperforated Release Film
- XCR Epoxy Coating Resin ~1.5kg/m²

1. Prepare the surface for the resin Basecoat by keying with a 120 grit abrasive, then remove any debris and ensure that the surface is free from contaminants.
2. Mix up and apply a brush coat layer of Black XCR Basecoat, you will need approximately 330g of Basecoat per square meter to be covered.
3. Wait for the Basecoat to cure to the tacky stage. At 20°C this will typically take around 2-3 hours but it's a good idea to check the state of the resin at regular intervals. Using a gloved finger, the resin should feel slightly sticky but not leave any resin on the glove if lightly touched.
4. Next, apply the chopped tow to the Basecoat in a random and scattered pattern until all of the Basecoat is hidden, the carbon should be held in place by the resin at this point. For an area of 1m², you will need about 4-500g of the chopped tow carbon.
5. Apply a layer of R210 unperforated release film over the whole surface and tape in place, this will allow you to press the fibres into the Basecoat and hold them in place. Then, leave the Basecoat to fully cure, this step should help to prevent the fibres from moving when applying next layer of resin.
6. Once the Basecoat has cured, remove the release film. If there are any loose fibres that are likely to be disturbed when coating these can also be removed. Next, mix up a batch of XCR coating resin (about 300g per m²) and coat the chopped tows, making sure that you don't lift the fibres or drag them out of position with the brush. This layer should be applied in an even coat and will need to fully wet out the carbon fibres. Be careful not to add too much resin at this stage as it will be

absorbed into the carbon and cause it to swell, this can lead to more of an uneven surface and require more work to finish later on. Once completely covered, the first layer of resin can be left to cure.

7. Once fully cured to a sand-able hardness, this first layer can be de nibbed and flattened to remove any of the high spots, be careful not to sand too far into the carbon as this will be visible with close inspection in the final surface. Once these high spots have been removed, give the whole area a key with 120 grit to prepare the surface for the resin coatings.
8. The coating can now be built up in 3 layers of XCR resin. For each batch you would look to use about 400-500g per m² which roughly equates to a thickness of 0.5mm per layer of resin. For this stage, you will be applying the resin when the previous coat has cured to the 'B' stage, resin will be mostly cured but is still slightly tacky to the touch. If the resin cures further than this, then the surface will need to be keyed before adding more resin. Once these 3 layers of resin have been applied, they can be left to fully cure.
9. There should now be enough resin thickness to be able to properly flatten the surface without breaking through into the carbon. Starting with a 120grit abrasive you will need to remove the high spots and any surface imperfections in the resin until you have a sufficiently flat surface. Once you are happy with this stage you can then move onto the 240 grit and proceed to remove the scratches from the 120 grit.
10. Once you are happy with the flatness of the surface, any dust or debris needs to be thoroughly removed. Anything left on the surface at this stage may be seen in the final finish. Once completely clean, the final layer of XCR can be applied. This coating only needs to be a very thin layer to give the surface a smooth glossy finish. Try to use long brush strokes to produce the smoothest surface possible, this will make things easier in the final step.
11. The last step is to give the surface a final flat and polish, this is done by using the finer grades of abrasive and working through them methodically until 1200 grit. At this point you can then swap to a polishing compound to bring the surface to a high gloss finish.