GlassCast®

THE CLEAR CHOICE IN RESIN

HOW TO MAKE A

FORGED CARBON RIVER TABLE

THE COMPLETE GUIDE

How to make a Forged Carbon River Table

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Introduction

The aim of this guide

There is no denying that resin river tables have been one of the hottest topics when it comes to epoxy resin over the last few years. Another popular look making waves in the composites world which caught our eye is 'Forged Carbon', these two influences led to this project which sees us fuse together the classic resin river table, with it's live-edge natural beauty and the hi-tec forged carbon fibre.

This perfect combination gave birth to this project; the unimaginably cool Forged Carbon Fibre Resin River Table.

If you're already making resin river tables this would give a great variation and if you're new to resin river tables but love the forged carbon look, it's equally achievable for you, even with limited experience.

Our professional quality epoxy GlassCast 50 Resin is available on the GlassCast Resin website along with the chopped tow carbon fibre needed to create the stunning forged carbon effect. You can also find all the ancillary items needed for this project along with the GlassCast 3 for the alternative finish.

The aim of this guide is to provide professional furniture makers, artisan joiners and keen DIY'ers with a detailed guide that can be followed step-by-step with all the information on how to make a stunning table like this.
Of course the techniques shared in this guide can be adapted to make a range of furniture pieces which combine wood, resin and carbon fibre chopped tow to create stunning effects, including tables of any shape or size, serving boards, chairs and more.

This eBook also includes all the expert advice you will need to avoid common mistakes and make a success of your forged carbon river table project.

So if you're serious about making a piece of furniture like this stunning forged carbon river table it's suggested that you read this guide in full before you start, watch the accompanying tutorial and read the technical and safety datasheets on the product pages before getting started.

If you need any advice or help get in touch with our friendly team at GlassCast who will be happy to help, advise and assist with everything you'll need to produce a stunning piece like this!

Before You Begin

What You Will Need

Resin, Chopped Tow, Wood & Other Materials

Materials

- GlassCast® 50 clear epoxy casting resin (including hardener)
- Carbon Fibre Chopped Tow
- Your Choice of Wood
- GlassCast® 3 clear epoxy coating resin (including hardener) for a glossy top coat*

Ancillaries

- Polypropylene Sheet to act as the base board
- Bristled Roller
- Disposable Paint Brush
- Resin Barrier Tape
- Abrasive Paper
- Reusable Resin Mixing Stick
- Calibrated Mixing Cups and Large Buckets
- Wooden battens and blocks and clamps or weights
- Resin spreader*
- Nitrile gloves, glasses/goggles and a respirator mask (in case of insufficient ventilation)

Finishing & Polishing

- Tools including DA Sander with a range of abrasive papers and a Power Planer
- Cleaning Equipment
- Table Legs and Danish Oil

*GlassCast 3 Coating resin and the resin spreader is only required if you would like a full gloss surface along with a resin spreader. You will also need digital scales if using GlassCast 3.

Choosing Your Wood

The first task is wood selection. There are a few things to consider when choosing the wood for the project and the aesthetics of the slab is very important. In the project, we selected a beautiful piece of sycamore with it's naturally pale appearance and fine grain detail which contrasts so beautifully with the dark, complex forged carbon fibre.

It all comes down to personal preference, but whichever wood you choose - make sure that it is well seasoned and has a low moisture count. Wood is affected by environmental factors and is prone to expanding and contracting in varying levels of humidity. It's important to start off with a well seasoned piece of timber which will minimise the amount of shrinkage and distortion in the finished piece and will reduce issues you may experience along the way.

Making sure that your slab is as flat as possible will help in the long term and mean that you will have less work to do - such as excessive machining later on in the process.

We are lucky enough to have a saw room at GlassCast HQ and have access to the tools needed on site, if you don't have access to this machinery it is possible that the timber merchant you sourced your wood from could do the following for you:

You will need to cut your wood straight down the middle, then flip the planks so that the two live-edges face each other creating the river channel.

If the wood is a little twisted, it will benefit from a few passes though a thicknesser. Although it's not absolutely essential at this point, it will reduce the amount of flatting and finishing to be done later in the process.

When creating a traditional river table, you would need to pre-seal the live-edge to prevent any air being drawn out and being visible in the resin. However as we are going to be putting a lot of carbon fibre in to the river, these bubbles won't be visible, so we can skip that stage.

What we do need to do is to remove any loose material along the live-edge, like bark, then give the edge a good 'key' with coarse abrasive paper so that the resin will bond strongly to the wooden edges.

Once the live-edges are all cleaned up and the preparation to the wood is complete you are now ready to move on to setting up the barriers around the slabs and fixing them in place ready for the first pour.

Safety Information, Environment & Epoxy Resin

IMPORTANT SAFETY INFORMATION:
GlassCast 50 Resin is a chemical product. Before storage or use you must download and read the accompanying safety datasheet, available on the GlassCast 50 product page.

A Summary of the most important information is as follows:

•Always wear nitrile gloves when handling the resin or hardener

•Never touch uncured or partially cured resin with your bare skin

•Wear suitable eye protection when handling the resin or hardener

Although GlassCast 50 Resin is solvent free and has almost no odour you should still work in a well ventilated area or wear a vapour respirator mask.

Ambient Temperature, Pot-Life and Cure Time

Epoxy resins are highly sensitive to ambient temperature and moisture.

To achieve the best results, we recommend working in a room temperature of 20°C. GlassCast 50 can be used in temperatures from 15 to 25°C but higher temperatures will reduce the pot-life of the resin significantly; at 20°C the pot-life is between 30 and 45 minute and the curing time is 48 hours.

Epoxy resins are very susceptible to moisture and humidity so it's important to make sure the environment is dry and heated.

Airborne Dust and Contamination

Whilst the resin is still in the early stages of its cure, it is important to keep airborne dust and contamination to a minimum. Before you begin you should ensure that the area you're working in is as free as possible from dust and dirt.
Although you need good ventilation whilst working on the project, in order to minimise airborne dust and contamination, it's best minimise air movement or disturbance in the room as soon as you have finished working.

Epoxy Resin For Your Project

The resin used in this tutorial is GlassCast 50 casting resin which is specially developed for use alongside natural wood to create professional quality projects. To ensure the best possible appearance for projects like forged carbon fibre river tables this resin is highly UV resistant, designed to degas itself during cure and can be cast in thick section in a single pour. We recommend limiting pour depth to 25mm when poured into or alongside wood, it can be layered to achieve a greater depth if your river channel is deeper.
When it comes to finishing your project, GlassCast® 50 is highly polishable and can easily be buffed to a glass-like finish with it's tough formulation making it hard wearing and less prone to scratches.

Epoxy Resin for your River Table Project

Epoxy is epoxy, right?

The resin used in this tutorial is GlassCast® 50 from Easy Composites which is a resin specially developed for use alongside natural wood materials to create professional quality resin furniture pieces.

To ensure the best possible appearance for projects like river tables this resin is incredibly clear, highly UV resistant and is designed to degas itself during cure.

Unlike more conventional epoxy resins, GlassCast® 50 can be cast in thicknesses up to 50mm in a single pour adequate for just about any river table) and if more thickness is required it can be layered on itself to produce a seamless block of resin of almost any thickness.

When it comes to finishing your project, GlassCast® 50 is highly polishable and can easily be buffed to a glass-like finish and it's super tough formulation makes it hard wearing and less prone to scratches.

How much resin will I need?

The very nature of a 'live-edge' on a piece of wood makes it difficult to calculate exactly how much resin you will need for the project.

There are some practical methods that can be used to actually measure the exact volume of an irregular shaped cavity - such as pouring rice or sand into the gap and then measuring the volume - but in most cases it is probably more a case of estimating the volume of the gap and then allowing a little extra.

Areas that are to be filled with resin (for example the gap between two live-edge planks on a river table) should be measured approximately in length, width and depth to find the cuboid volume, as follows:

$$Length_{(in\ metres)} \times Width_{(in\ metres)} \times Depth_{(in\ millimetres)}$$

The resulting number will be the volume of this shape in litres: For example:

$$1{\cdot}5m_{(length)} \times 0{\cdot}15m_{(width)} \times 30mm_{(depth)} = 6{\cdot}75_{litres}$$

In simple terms, 6.75 litres of resin can be approximated as 6.75 kilograms of resin.

We would always suggest slightly overestimating the amount of resin you think you will need as it is likely that the wood will absorb some of the resin and it's always better to have mixed too much rather than too little - especially when colouring the resin, to ensure a consistent colour.

Avoiding Overheating / Exotherm

The GlassCast range of resins, in common with all epoxies, generate heat as part of the curing process. In order to ensure that the resin does not overheat during mixing and curing, it is essential to make sure you stay within strict limits of ambient temperature, time-in-pot and pour depth, as well as avoiding localised overheating from direct sunlight, nearby radiators or heat guns/hair dryers. Failure to do so could result in damaged resin, or in extreme cases, resin smoking or igniting.

The recommended working temperature for GlassCast is 18-20°C. When working in higher ambient temperatures, pay attention to the reduced pot-life and maximum pour depth, as shown below.

Ambient Temperature	**15°C** (minimum)	**20°C** (recommended)	**25°C** (maximum)
Maximum Time in Pot (Pot-Life)	80mins	60mins	40mins
Maximum Pour Depth Into a thin-walled mould (silicone/plastic)	50mm	40mm	30mm
Maximum Pour Depth Into wood or an insulating mould	25mm	25mm	18mm
Initial Cure Time	96hrs	72hrs	48hrs

Ambient Temperature

Epoxy resins are highly sensitive to ambient temperature (room temperature) throughout their cure. For best results, we recommend working in a consistent room temperature of 18-20°C. GlassCast can be used in temperatures from 15 to 25°C but higher temperatures will reduce the pot-life and the maximum pour-depth of the resin significantly. Never work in ambient temperatures exceeding 25°C, or exceed the maximum pour depth for a given ambient temperature (as shown in the table above) otherwise the resin could dangerously overheat, especially on larger pours.

Maximum Time in Pot (Pot-Life)

As soon as the resin and hardener are mixed together, the curing reaction begins. Due to the volume of resin all in one place, mixed resin in the pot will begin to gradually warm up. The amount of time that mixed resin can stay in the mixing pot before it overheats is known as its pot-life. Once you've mixed your resin, make sure you use it within the pot-life stated for your ambient temperature (see table above). Once you're done, if you have more than the maximum pour depth of leftover resin in the pot, place the pot outside - just in case it starts to overheat.

Localised Heat Sources

Whilst close attention should be paid to the ambient (room) temperature, it is also important to avoid any localised heat sources which can also cause an exotherm. Examples of localised heat sources include:

- A hot radiator at one end of a cooler room
  If the resin project is positioned above or near the radiator it could start to exotherm, even though the room temperature is within the recommended limits.
- Direct sunlight from a window
  Sun shining through a window onto your resin project or surrounding area can cause significant hot-spots which can easily cause the resin to exotherm, even in a relatively cool room.
- Heat-guns or hair dryers
  If using a heat-gun or hair-dryer as part of your resin project, do so sparingly to avoid warming up the resin significantly. Excessive use of a heat-gun or hair dryer can easily accelerate the cure and cause the resin to exotherm.

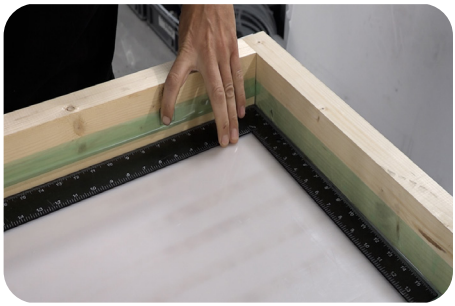
Step-by-Step Guide

1. Setting up the Barriers

Having carried out all the preparation needed on the wooden planks we can now move on to building the barriers. Lay out the sycamore planks and decide how wide you would like the river channel to be then you will be ready to build your frame. This will act as the mould box for the table top.
Building up from a firm, flat work surface we used a polypropylene sheet to create a super smooth, clean surface that the resin won't stick to.

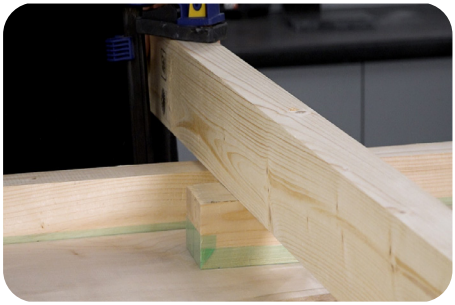
Stick the polypropylene sheet down with double sided tape and check that the surface is perfectly level before continuing.

It's worth noting that the place you set up the project needs to be a suitable place for the pour and where it can be left to cure, where it won't be disturbed and can easily be covered.



To create the barriers around the perimeter of the slabs of sycamore, use some wooden battens and resin release tape.

Resin release tape is great for this application as the resin doesn't stick to it - you may be able to use standard parcel tape as an alternative, however we would recommend conducting a test if using other materials in case it won't easily come off the cured resin.



When applying the tape to the batten leave an overhang, fold it back on itself to create a crease and use this to stick it to the base sheet.

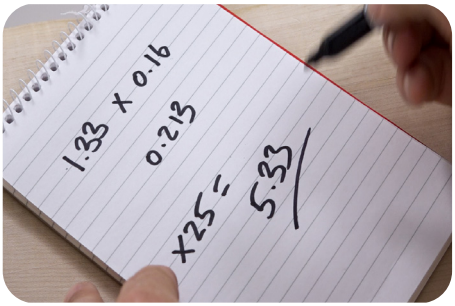
To seal the corners, simply cut the tape and crease at a 45° angle to fit it perfectly into the corner to complete the seal all the way around the frame, we show how to do this in the tutorial.

Once the barriers are all in position, set up some bridging timbers and blocks to use with clamps to hold the slabs down to prevent them floating in the resin. For ease in the demoulding process, cover the bases of the small blocks of wood with release tape and use below the bridging timbers, and clamp into position. This process will also help to take out some of the gentle curvature in the planks if present, and save on work later in the project.

2. Resin and Chopped Tow Calculation

To work out how much resin and carbon fibre chopped tow you will need you will first need to calculate the area of the river section between the two planks.

The example used in the tutorial is based on a 133cm length plank, but because the river is against the live-edge of the wood the best way to calculate this area is by taking an estimate of the average width using a measuring tape along the channel - this project measures an average of 16cm.



To work out the area we will convert the measurements from centimetres to metres:

1·33 metres X 0·16 metres
= 0·213 square metres
X 25mm = 5·33kg's

The depth of our river channel is 25mm so a simple way to work out the volume is to just multiply the 0.213 sqm by the 25mm.

This equals a total of 5.33 litres, we can roughly think of a litre as being a kilogram of resin which means that we would need 5.33kg's of GlassCast 50.

We also know that we want to add the chopped tow carbon fibre to the resin and having conducted lots of tests we have found that adding approximately 20% carbon fibre seems to give the best results. This percentage level is also the optimum amount to give that real 'solid' forged carbon fibre look without the mix becoming too thick and hard to work with.

Having already worked out how much resin will be needed for the project, adding 20% of the chopped tow carbon fibre will bulk up the mixture substantially. We could adjust the resin accordingly to account for this, but in this case we rounded the resin down to 5kg as the calculation was 5.33kg's. We can simply calculate 20% of 5kg as 1kg and use 1kg of chopped tow carbon fibre.

To achieve the best forged carbon fibre effect on this type of project we have found that the best method is to work upside-down. This means that the bottom of the wood and the bottom part of the river (against the polypropylene sheet) will become the surface of the table so do make sure that you place your favourite side of the planks face down in the mould frame.

It is also worth noting that to achieve the best results you need to concentrate on the first layer/or pour which will become the visible surface of the table.

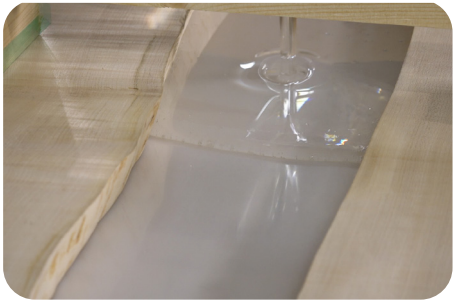
3. The Surface Pour

The first pour will be the surface layer and as mentioned previously needs to be excecuted correctly to ensure the best results on the table. For the first pour you need to mix up a fifth of the overall quantity. In the tutorial the project uses a total of 5KG of GlassCast 50 and 1KG of chopped tow. So, this first mix will need 1kg of GlassCast 50 and 200g chopped carbon tow.

The recommended mix ratio for GlassCast 50 Resin is by volume where the resin to hardener ratio is 2:1, this means 2 parts resin (part A) to 1 part hardener (part B).
Calibrated mixing cups are really useful for measuring by volume as they already have the 2:1 scale printed on them. Fill the resin to line A and the hardener to line B.
Then combine the resin by mixing slowly and steadily to minimise bubbles for 3 minutes, ensuring that you scrape the sides and bottom of the cup.

Next pour the mixture into a 2nd clean cup and repeat the mixing process for a further 3 minutes. This process is called double-potting and is to ensure that any unmixed resin from the bottom or sides of the pot do not make it on to the project. If this process is missed it can cause problems to the curing process and the finish.

TIP: a useful way of knowing when your resin is fully mixed is that it will return to it's perfectly clear state, any cloudiness or oily effect indicates that it is not thoroughly mixed.



You are now ready to pour the resin into the river! Pour the mixed resin into the river channel, then allow it to stand for a short while to release any bubbles that may be present in the pour from mixing, check the edges to make sure no bubbles are clinging to the sides.
While waiting for the bubbles to dissapear weigh out the carbon fibre - when handling the chopped tow it is very important to wear the correct PPE including gloves, eye protection and a respirator.

Spread/sprinkle the carbon fibre evenly along the resin river - with the aim of blocking out the surface below with a dense consistent layer.
Once all the carbon fibre is distributed, use a combination of a brush and a bristled roller to wet out the fibres and consolidate them.
By adding the carbon fibres in this way it helps to ensure that the cosmetic side of the table is void free and has little to no air entrapment.

Adding the chopped tow using this method is a much more gentle way of working with the carbon fibre and helps to keep the individual tows separate, which is key to achieving that perfect forged carbon fibre look.
If you identify any areas that require more carbon fibre, just add the extra in and repeat the wetting out process with either a brush or roller and make sure that you check that all the fibres are consolidated down, paying close attention to the edges of the river against the side barriers and where the resin meets the wooden river edges.
As this layer will become the cosmetic face of the table, take the time to make sure that any trapped air is forced out through the carbon fibres. Allow the project to sit for a while before revisiting it with the roller to push out any more bubbles that may have appeared.
Our recommendation is that when you think this layer is complete, give it another roll over with the bristled roller just to be sure.

At the end of this stage, the critical surface layer of the table is completed and wetted out sufficiently, it's now time to move on to the main pour of the project.

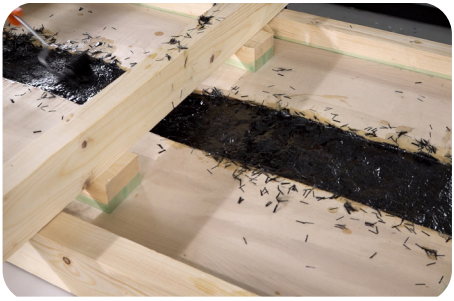
4. The Main Pour and Cure

The mixing process for the main pour is done in the same way as the surface pour. Measure out the remaining resin and hardener into a large bucket. If you are using the remainder of a 5kg kit as done in the tutorial you can safely pour out all of the remaining resin and hardener into the bucket, ensuring to drain the containers properly. If you are not using a full kit make sure that you accurately measure out the parts again using the calibrated mixing cup at the 2:1 ratio.

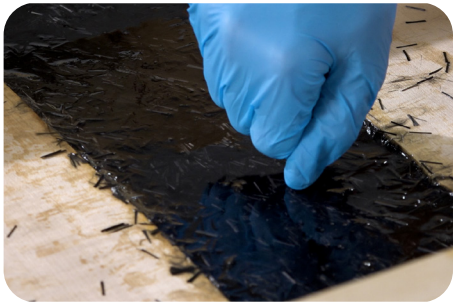
Mix the 2 parts together slowly and steadily and use the double-potting method, then set aside the the mixture to allow the bubbles to rise and pop out of the mixture.

Pour the clear resin on top of the previous layer, filling up to approximately 5mm below the top of the planks. Saving a small amount of the mixed resin in the bucket for top up's.

Now add the majority of the remaining 800g of the carbon fibre chopped tow, again keeping a small amount in reserve for top ups.



Next use a combination of brush and roller to mix the tow into the resin.
It is important in this step to evenly distribute the tow in the resin and ensure that the tow is completely wetted out.
NOTE: it is always worth remembering that when working with GlassCast 50 Resin the maximum pour depth advised (when pouring into wood) is 25mm at a time.



This is because the wood acts as an insulator and if poured too deeply the resin could overheat and lead to problems through overheating. To avoid the possiblilty of this happening, limit pours to a depth of 25mm and if you require a greater depth of pour you need to allow the first layer to partially cure to the B-stage. The B-stage is where the resin has firmed up but still has a tackiness to the surface - you can test this with a gloved finger - you should be able to make an indent but no residue will stick to the glove. GlassCast 50 will reach this stage between 8-12 hours, if this stage is missed you need to key the surface with abrasive paper to achieve a strong bond.

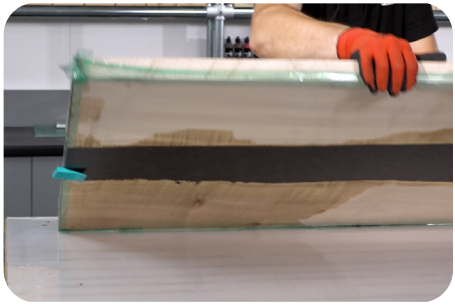
The project is at the upper limit of the 25mm pour, so to air on the side of caution we set up a fan at the end of the workbench to drive excess warm air away from the project and the curing resin and make sure that we keep the temperature of the room around 18-20°C .

Once the main pour is fully wetted out, leave it to sit for a few minutes to allow bubbles to rise out of the mix, then as with the surface pour use the bristle roller and brush to give it a final roll over. At this point you should see that the fill level is level with the top of the slabs but not over it.
If the pour has come up a little short, use the previous steps using the spare resin you set aside and top up as necessary. Repeat the stippling until you are satisfied with the fill level.

It's now time to leave this to fully cure for 48 hours. Leave the fan running to push away any heat and close the room up to avoid any dust or debris getting on to the curing surfaces.

5. Removing the Barriers

After 48 hours have passed check the cured surface, ensure that you wear nitrile gloves. The surface should be rock solid and if you press firmly with your fingernail it shouldn't leave any impression. If you do find at this stage that it is a little soft, leave it for a further 24 hours to fully harden.



Once you are satisfied that the surface has fully cured, you can remove the barriers.
Undo and remove the clamps, then using a mallet knock the barriers away from the form. The advantage of using the tape on the barriers and blocks is that they easily come away from the slab. Next using a wedge and mallet, prise the form away from the polypropylene sheet - it will come away really easily and leave an amazing surface straight from the mould.

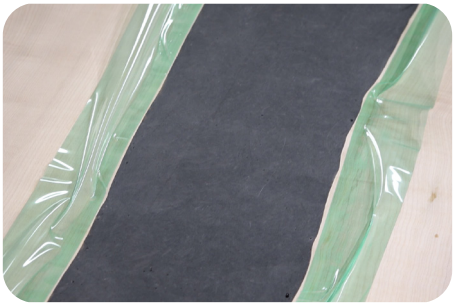
Remove all the excess bridging timbers, clamps and blocks and turn the slab over on the polypropylene sheet. You will now be able to remove any tape that has pulled away with the cured piece and inspect it more closely.

6. Fixing Pinholes and Voids

On closer inspection you may be able to see some tiny pinholes, this is difficult to avoid due to the nature of the chopped tow material and can be easily rectified. The next step is optional depending on the type of finish you wish to achieve on your project.
The options depend upon whether you would prefer a natural wood look with a polished forged carbon fibre river or a full hi-gloss surface over the wood and forged carbon.

If you would prefer a hi-gloss finish over the entire surface of your table please see STEP 8 on page 15. Or, to produce a table with a polished forged carbon river and the natural wood slabs follow the next step to fix the surface pin holes and voids.

To flat the surface of the table we used a router set up on a bridge and made multiple passes over the whole surface area. This method does take a few passes, but it is certainly faster and more consistent than sanding. This is the best way to get the job done without the need to invest in large and often expensive tools.
To get rid of the lines in the table surface left by the router, sand using 120 grit abrasive paper to a all-over smooth surface. If you have access to a hand-held sander this will speed up this stage of the process. Once smooth thoroughly clean the surface and most importantly using a clean brush and a vacuum cleaner remove all dust and debris from the pin holes, voids and surface.



Before we move on to the final sand and polish, this is the time to fix any pinholes or voids on the surface of the river.
To prevent excess resin getting on to the wood, position strips of the resin release tape along the river edge as close as possible to the edge of the wood, this will save time on the final flatting and polishing stage. To fill the pinholes and voids, any of the GlassCast Resins would be suitable.

In the tutorial, GlassCast 50 was used (this requires a 48 hour curing time) if time was of the essence the GlassCast 3 or 10 would be suitable and would be fully cured after 24 hours.
Simply measure out and mix up a small amount of resin and hardener (according to the stated ratio) and using either a brush or a resin spreader work the resin into all of pinholes and voids. The brush is really useful for breaking the surface tenion and work the resin into any hard to reach areas using a stippling action. When you are satisfied that all areas are fixed allow to cure for the time stated.

7. Flatting and Polishing

The resin is now fully cured and rock solid. The next step is to flat the table up to a perfect finish. Firstly remove the tape from the river edges and trim the slab using a table saw or power planer. To flat the high spots left by the resin from the last stage, sand using a coarse 120 grit paper to a level surface then work through the grits from coarse to fine over the whole surface - ideally up to 1200 grit.

Working up through the grits properly is worth the time it takes as it will expose the beautiful grain in the wood and the incredible detail in the forged carbon fibre.

The final step to achieving a beautiful finish is to apply a couple of coats of danish oil which will make the detail in the contrasting surfaces pop!

Finally, attach table legs of your choice to complete the project.
In the tutorial we used some chunky box legs in a matte charcoal grey to give the table an industrial feel.
If you would prefer to finish your project with the hi-gloss coating of GlassCast 3 Resin, you can miss out this STEP (7) and follow STEP 8.

8. Alternative Hi-Gloss Finish

If you prefer the look of a hi-gloss surface finish all over your table top, this is easily achieved. By following the steps in this guide up to STEP 5 (on page 12) - Removing the barriers, the process is the same. At this point you would need to follow the steps listed in this section.

First, flat the surface of the resin to remove any high spots using 120 grit abrasive paper, if you have access to a Dual Action Sander this is the best way to achieve this.
Then thoroughly clean the surface including any voids or pinholes this process has exposed.
The most thorough way to do this is by using a dry brush and a vacuum cleaner to make sure that all dust and debris is removed followed by a wipe over with a damp cloth.

The next step is to apply a sealing coat of GlassCast 3* coating resin. The GlassCast 3 mix ratio is 2:1 by weight, so you will need to weigh out the quantities using digital scales.
The mixing method is the same as the GlassCast 50 mixing process - mix the resin and hardener together for 3 minutes before transferring to a 2nd clean pot and mix for a further 3 minutes.

Now brush apply the resin in a thin but even coat and leave to fully cure for 24 hours.
Once the resin has fully cured, flat the entire surface using the 120 grit paper and clean up ready for the main pour.

Brush towards the edges of the table to stop resin running down the sides.

Then check the surface of the table is completely level before leaving to fully cure for 24 hours.

*GlassCast 3 Coating Resin is perfect for creating stunning glossy coatings due to it being hard wearing, self-levelling, self-degassing and scratch resistant due to it's suitability for use on floors, bartops, countertops and tables.

Once cured, sand the surface again all over with 120 grit abrasive paper and thoroughly wipe clean.

Then apply resin release tape around the entire table top. This will act as a retaining tape around the edge and prevent the GlassCast from flowing off the sides.
Make sure that the tape edge stands proud of the table top by a few millimetres, it's advisable to pour the resin to a depth of 2mm.
The resin needs to be at least 2mm deep for its self-degassing and levelling technology to work.

The table in the tutorial measured 1.33m long by 0.64m wide and we need to pour a depth of 2mm which can be calculated as:

1·33m x 0·64m x 2mm

= 1·7 (1·7kgs)

The 1.7 can roughly be equated to 1.7kg's of GlassCast 3 so for this project 2kg would be more than enough to apply the sealing coat and cover the main pour and will use 1133g resin and 567g hardener. Mix in the usual way for 3 minutes, scraping the sides and bottom of the pot before transferring to a 2nd bucket (double potting) and mix again, then allow to stand for a few minutes before pouring.

Pour the mix all over the surface of the table, then using a notched resin spreader move the resin around the surface.
Use the spreader to push the liquid up to the taped edge and check for bubbles.
Sometimes bubbles will try and cling on to the tape around the edges so use a spreader or mixing stick to dislodge them.
Do not use heat to remove bubbles around the tape as this may shrink the tape and damage the retaining tape and could cause leakages.

Finally leave the resin to fully cure, if possible place a cover over the surface to keep out any dust or debris and make sure that the environment stays at an ambient temperature of 20°C. This will need to cure for 24 hours before moving on to the final step.

Check the surface is fully cured by testing with a gloved finger then the barrier tape can be removed.

To remove the meniscus left around the edges and neaten the sides of the table, the table top was trimmed on a table saw to take off a few millimetres.
Alternatively you could use a power planer if you have access to one and on a table of this size the right result could be reached quite easily and quickly.

Follow up the trimming by sanding the sides of the table (taking care not to touch the top surface of the slab), work up through the grits from 240 grit all the way up to 1200 grit.

Don't move on to the next grit until all marks are removed from the previous grit. When sanding it is always worth taking the time to do a thorough job to achieve the best resutls.

The final step is to flip the table over and apply the legs, we chose these boxed industrial legs in a matte charcoal grey to compliment the forged carbon fibre.
As always with a project like this the style of legs and finish all comes down to personal preference.

So, project complete and this finish is awesome! The super hi-gloss surface really turns up the natural definition in the grain of the sycamore and amplifies the light reflections with the forged carbon fibre is incredible.

This additional layer of GlassCast 3 brings another dimension and depth to the project - the only thing for you to decide is which finish you want on your project?!

9. After Care

Now that your GlassCast® Forged Carbon Resin River project is complete you'll want to keep it looking great for years to come.

Here are a few important things to keep in mind when looking after your epoxy resin table:

• Hot Objects - You should not place hot objects directly on to the resin (pots, pans, plates or mugs) as this may mark the surface. Instead use coasters or heat proof mats. If you do find that hot objects have marked the surface it can be flatted and polished again to remove any marks.

• UV Light - GlassCast® 50 and GlassCast 3 has been designed to have the best UV stability of any epoxy resin on the market and should withstand years of indirect sunlight with very little effect. However, common with just about all materials of this nature, prolonged exposure to UV light, particularly direct sunlight, can eventually cause some change in the appearance of the resin.

For this reason, finished GlassCast® projects are not recommended for outdoor use and should be kept away from direct sunlight where possible.

• Scratches and Marks - GlassCast® 50 and 3 are very hard wearing plastics and will hold up to the rigours of light daily use without marking. However, accidental damage can be caused by sharp objects scraping over the surface of the resin or from things being dropped onto it. If this occurs, these can be polished out using the same process that was used for the initial sanding and polishing ; i.e. abrasive paper (for coarse scratches) followed by polishing compound to restore the gloss.

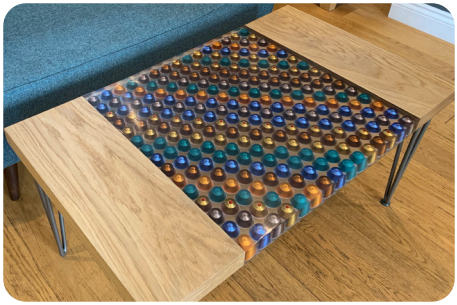
10. Alternative Projects

GlassCast 50 is the ideal epoxy resin for this incredible forged carbon river table and the techniques used to create this sleek table with it's hi-tec forged river can be used to create other furniture pieces such as river lamps and chopping boards using the same processes.

By marrying the natural wood with the high-end carbon fibre, an unimanigably cool result can be achieved and this fusion of epoxy resin, wood and composites materials is an amazing addition to the world of interior design.

Variations on this process could be:

- Presentation / Serving Boards or Platters
- A Wooden Lamp Base - with Forged Carbon Channel
- Coasters and Place Mats

Alternative Projects could be:

- The Classic Resin River Table
- The Neon Plank Table
- A Full Carbon Fibre Surface Table
- Embedments like Lego, Coffee Pods and the use of Pigments