



## **HOW TO; Paint your Carbon Fibre**

Do not allow the tubing to become excessively hot. High performance epoxy resins, together with oven post curing are employed in our tubes, however at temperatures above approximately 75°C the epoxy can soften, which dramatically reduces strength or otherwise can cause the tube to bow or warp. Note that black objects are the best absorbers of IR radiation (heat) and we have recorded a surface temperature of 65°C from a tube lying flat on the ground in the summer sun on a windless day.

Whilst these two effects can be either avoided or are relatively long term (many dinghy sailors have chosen to leave their masts naturally black) we recommend painting the composite tubing with a UV resistant polyurethane based paint or clear coating. Correct application of paint will effectively eliminate degradation due to these effects and allow the other long life properties (i.e. excellent corrosion and fatigue resistance) of composite tubing to be realised.

- Prepare the painting area accordingly. Avoid an area where paint may drip onto plants or grass, or cover these areas sufficient to protect them. An area out of direct sunlight, dry and of moderate temperature (21°C) is ideal. Whatever the location, good ventilation is paramount.
- Before painting, all fittings must be removed. If a fitting is not able to be removed, cover it in a quality masking tape and if necessary, newspaper.
- Tape off any areas that you do not want painted so that the only surface that is not covered, is the surface intended to paint.
- Determine whether your mast or any other surface you wish to paint is coated with resin or any other substance. This can be done by identifying areas or surfaces of glassy or high-shine lustre.
- Areas or surfaces that do not have a resin coating will look matt/dull black
- If your mast has a resin coating, it needs to be sanded off so that the paint can adhere to the surface.
- Don the appropriate Personal Protection Equipment (eye protection and breathing mask).
- Use 80 grit emery paper to remove the majority of the resin. Great care must be exercised not to remove any of the carbon. If the dust is black, you are sanding carbon away.
- Once the resin is removed, sand the surface again lightly with 120 grit emery paper to ensure smooth, resin free piece.
- Still using the PPE, brush the dust off the mast and surrounding areas and dispose of properly.
- Using Acetone/Solvent and a clean rag, wipe down all surfaces to maximise the cleanliness.
- Use a 2 part polyurethane clear coat to paint your mast. We recommend Awlgrip (<http://www.awlgrip.com/contact-us/AsiaPacific/region.aspx>) or Sterling (<http://www.yellowpages.com.au/qlld/archerfield/sterling-paints-12747931-listing.html>).
- The paint can be applied using either a brush or spray applicator.

- Care must be taken to ensure a smooth and even coat. Be sure to either rotate the mast or check underneath for drips.
- If using a brush, a high quality brush is recommended to reduce the risk of loose bristles. Any loose bristles should be removed carefully.
- Leave to dry until surface tacky. Then remove the taped edges.
- This is to prevent hard lines forming on the edges of the painted surface. However, remove the tape when the paint is still wet and it could run. A good tell tale is if you gently touch the painted surface in an inconspicuous area, a fingerprint is left but no paint remains on your finger.
- Then leave to fully harden before reattaching any fittings or attempting to re-install mast. We recommend 24 hours minimum however check with paint manufacturer.

### **CST Composites**

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