

Tips for Using G10 Fin Material

G10 is a glass-epoxy laminate with extremely high strength for the thickness of the material.

The strength of the material makes it a good choice for model rocket fins where a very thin material is advantageous (such as in competition rockets), or just where high strength is wanted and weight is not necessarily a big factor (in some mid-to-high power rockets for example). One other advantage over wood fins is that there is no grain to fill, so finishing is usually much quicker.

The strength advantages however come with the drawback of the material being much more difficult to cut and smooth than more traditional fin materials like balsa or basswood.

The thinner sizes of material (up to 0.020) can usually be cut with sharp scissors or a typical hobby knife. It may take several passes to get a clean cut. You can also score the material with your knife and snap the G10 along the scored lines. Be aware that the G10 will dull blades (and scissors) quickly!

Thicker sheets are best cut with a razor saw or a band saw. A blade with 14 to 18 teeth per inch is recommended.

Likewise when smoothing cuts or rounding/airfoiling fins have plenty of sandpaper on hand and use a sanding block if you have one.

As the G10 material doesn't have the pores of a wood fin, you cannot use wood glue to attach the fins to your rocket. The best choice for smaller models is usually quick curing (thin) Cyanoacrylate ("CA") glue for the initial attachment (see the [article](#) on our pre-cut G10 fins for more details). For bigger models, epoxy may be the best option, although you can still use CA for attachment of the root edge then heavily fillet with epoxy for strength. It's a good idea to use coarser sandpaper (220 grit is so) to roughen/scuff up the sides of the fins where adhesive will be applied. This will give the epoxy a better surface to hold on too instead of a very smooth surface.