

Make shop tools quickly with G/5

Shop tips

By Tom Pawlak

Gougeon Brothers' G/5 Five Minute Adhesive can be used an infinite number of ways to repair and build a great variety of projects. From filling stripped screw holes in drywall to repairing broken wooden furniture, its versatility is limited only by one's imagination. I value G/5 in my workshop because its quick cure time lets me build quality jigs, fixtures and molds that are available for use almost immediately. These include jigs or positioning fixtures to drill holes in specific locations or guide routers and saws along specific paths for trimming parts to final size. You can also make specialty sanding pads or molds so you can quickly reproduce a damaged section.

To create shop tools like these, you must produce molded images from specific sections of the original parts by laminating with lightweight fabrics and epoxy.

Jigs and positioning fixtures

There are a number of ways to create jigs and fixtures. The best method will depend on the complexity of the parts you hope to locate, trim or drill accurately. If you are dealing with simple shapes that involve flat surfaces, you can make jigs and fixtures from wood scraps and a few dabs of G/5 epoxy. The flat surfaces give you something to easily reference from and accurately position multiple parts of the same shape. On more complex parts, especially those that involve curved shapes or rounded edges, you can create fixtures by laminating with several layers of lightweight fabric and epoxy.

To laminate with G/5 and fiberglass fabric, you'll need several small batches of epoxy, lightweight fiberglass fabric or cotton fabrics, filler for thickening the epoxy, and a mold release of some sort. To begin, protect the part's surface with a mold release, such as Meguires Mirror Glaze™ automotive paste wax, so the epoxy will not stick. You need

four to five coats to ensure easy removal after the epoxy laminate has cured. Other release agents that work well include plastic food wrap, shiny cellophane tape, and some forms of furniture polish. Mix a small batch of G/5 and quickly apply it to the fiberglass so it has time to soak into the fabric before gelling. By the time you mix another small batch of G/5, the previous layer will have soaked into the fabric and cured enough so you can continue laminating. Apply additional layers so the fixture will be stiff and strong. You can carefully remove the fixture from the original part about 30 minutes after applying the last layer. Remove by gently forcing wood wedges between the original part and the laminated fixture. G/5 initially cures to a hard rubber-like state that continues to harden over several hours.

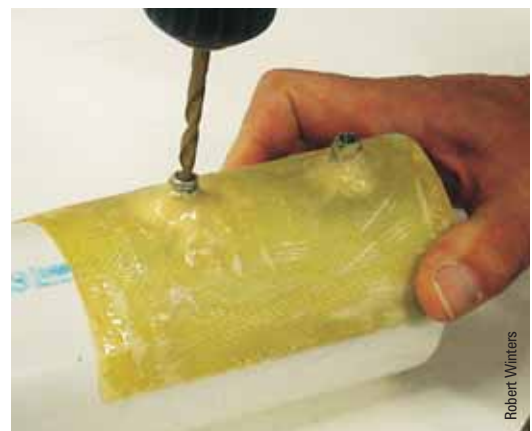
Once removed, the fixture can hold parts in specific locations for machining purposes or to index from or locate defining features on production parts. Each jig allows machining operations to be performed in exactly the same location on each part produced. Once you have made the part/mold, glue on bushings so you can accurately position drills to make holes in exactly the same spot at exactly the same angle on any number of identical parts.

G/5 thickened with 403 Microfibers is ideal for creating thickened epoxy putty for gluing in and filleting around the drill bushings. 403 Microfibers works well because it stirs in quickly, leaving more time for working with the adhesive. Drill bushings are available from Lee Valley Tools at www.leevalley.com or 800-267-8735.

If you plan to use your molded fixture for trimming or for guiding a router, you need to incorporate reference surfaces into the tool to accurately position routers and guide circular saws along a specific path.

Create a positioning fixture by laminating several layers of fabric over the part to be machined. Use mold release, tape or plastic wrap to protect the part. Glue drill bushings in position with G/5.

When placed on the part (left), the fixture guarantees accurate positioning of the drill on every part (right).



Contoured sanding pads

G/5 also works great for creating contoured sanding pads. A molded-to-shape sanding pad can be helpful when you need to sand lots of identical wood molding. You can make contoured sanding pads by laminating with light-weight fiberglass or cotton fabric and G/5 epoxy. To do this, prepare a section of molding from which you want to pull an image by covering it with 2" wide shiny cellophane tape. The tape acts as a mold release, allowing removal of

the sanding pad after the epoxy cures. As described above, apply multiple layers of fabric and epoxy to create a stiff sanding pad. Remove the molded sanding block by forcing wood wedges between the plastic tape and the epoxy.

To use the sanding block, hold the sandpaper in position with two-sided tape or with feathering disk adhesive. For greater comfort, attach a wood handle to the back of the sanding tool with G/5 Adhesive. ■



1 Laminate several layers of glass over the profile using the object to be sanded as a mold. Duct tape acts as mold release and a spacer for the thickness of sandpaper.

2 Remove the pad from the mold after it has cured, usually in about a half an hour.

3 Trim the pad to shape with a bandsaw or sander.

4 Hold the sandpaper under the pad with double sided tape or feathering disk adhesive. Bond a shaped wooden handle to the back of the pad with G/5, if desired.