

Seaming, Gluing, & Fastening

Biscuits

Do not use traditional wood biscuits as they will not expand nor provide a mechanical advantage. Place Lamello® K20 clamping plate every 6" starting with the first biscuit 1" from the side. It is important to do a dry fit because if it is not tight fit during the dry fit, it will not be a tight fit once epoxy is used. Cut a slot in the center of the material, indexing from the top as Richlite may have slight thickness variation. Biscuits are engineered with a directional "tooth" that will be difficult to remove in the direction opposite the tooth. To remove the biscuit after dry fit, grab the tip or point end of the biscuit and pull in an arc away from the opposite end.

Splines

1/4" Richlite splines are an excellent choice for strength. Cut so that when installed in the slot, the grain (paper layers) in the spline follows the same direction as the grain in the sheet.

Tight Joint Fastener or "Dog Bones"

For use in non-structural situations only, these are ideal for field installations by sub-contracted or remote site installers.

Epoxy Only

Make sure that the joint gluing surfaces are roughed-up, 100 grit or less, for better glue adhesion. Do not over-tighten clamps to keep enough glue in the seam. Vacuum clamp fixtures work well for surface alignment.

Mechanical Fasteners

Mechanical fasteners are acceptable for situations where there is access to install them.

Built Up Assemblies

Richlite is currently being specified in applications where stack laminations are required. Examples include mold and die units, part assemblies, extra thick design elements, and countertop or casework built up edges. Please note the following guidelines when fabricating these assemblies.

- It is critical for this application to have the mating surfaces of the material to be abraded before being glued together. This applies to both stack laminations as well as mitered or butt-joined fabrications.
- If the surface is not abraded sufficiently, with 100 grit sandpaper prior to glue up, there will most likely be failure in the joint at some point due to moisture or impact. The mill finish and machine cut edge are

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both highly resistant to proper adhesion regardless of adhesive due to the low porosity of the material.

- The built up edge needs to be at least 1-1/2" deep to insure enough surface area for the mating parts to adhere and not create an imbalance on the front edge of the material. Any edge less than this will be prone to movement and instability.
- Mitered edges are acceptable and require the same abrasion technique on all mating surfaces. Any mitered edges less than 3/4" should be backed by a support block of Richlite.
- The edge of Richlite is not the same as the face of the panel and a built up/stacked edge will not look the same as a mitered edge.
- There are no maximum build-up dimensions.
- Built-up or mitered material must be 1/2" thick or more.
- Two part water resistant epoxies formulated for thermoset resins or phenolics are recommended for this application. Most other countertop adhesives WILL NOT be appropriate for use with Richlite. We suggest System Three® T-88 for any structural bonding. Loctite® E-30CL or Devcon® DEV-20845 5 minute epoxy are also acceptable.
- Screw clamps must be used to set the built-up edge to ensure a good bond with structural epoxies. SPRING CLAMPS WILL NOT WORK.
- These are general guidelines and it is recommended that any fabrication techniques be tested by the individual fabricator as each situation may have differing parameters that will affect the performance of the joints and laminations. These guidelines do not imply any warranty of work provided by independent fabrication companies and are superseded by the Richlite material warranty.



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Equipment

Clamps

Traditional mechanical screw type and vacuum clamps. Screw clamps are required to ensure a good bond with structural epoxies.

Biscuit Cutter

DeWalt® 3751-5 minimum power- 6.5 amps

Two-Part Epoxies

- Industrial Epoxy formulated for Thermoset Resin or Phenolic Resin
- 5 Minute General Purpose Epoxy: Devcon® DEV-20845
- Loctite® E-120HP, Hysol
- 3MTM Scotch-Weld™ Epoxy Adhesive DP125
- System Three® T-88 for anything structural (Available for purchase at systemthree.com)

Edge Connectors

- 1/4" Richlite splines
- Lamello® K20 Clamping Plate
- Mechanical Joint Fasteners such as KV 516 Tite Joint Dog Bone Fastener or draw bolts.

NOTE: Do not use standard #20 biscuits. Lack of water in epoxy does not expand biscuit.