



TorZo Fabrication Guide, Balsa/Balsa Fusion

Material Composition and Handling

The TorZo Balsa comes in both raw form (Balsa) and infused with an all acrylic resin (Balsa Fusion). Both the Balsa and Balsa Fusion materials can be cut, machined and sanded with standard tooling. Even with this infusion process, the material composition is 50 cellulose based.

Similar to other surface materials, including wood, rock, granite, and all other 100% acrylic resin based materials; TorZo recommends the fabricator wear a dust mask to prevent inhalation of any fine particles generated during the fabrication process. The MSDS is available online at www.torzosurfaces.com or by contacting the TorZo home office at 866-822-0002..

Material should be kept flat at all times, with a top and bottom cover sheet, to prevent the introduction of “bowing” to the panels.

Material should be kept clean from particles that could cause small nicks or scratches to the material surface during the fabrication process, and/or be included into a surface coating if coating is to be conducted post fabrication.

Material should be kept from all contact with water prior to fabrication. This will prevent any discoloration or warping due to water spot damage.

Material Properties

All boards are sanded to 220+ grit and have a tolerance of +/- 1/5,000 inch. Hence material thickness is relatively very uniform.

TorZo materials can have a certain amount of flex associated with the sheets. It is recommended when fabricating tabletops and countertops with the thinner materials that the fabricator glues the material to a 3/4” plywood or MDF template backer board in order to insure a flat surface.

Balsa comes in 36” x 96” x 1/4” and in 36” x 96” x 3/4” (1/4” Balsa laminated to 1/2” Baltic birch plywood) sheet sizes. All Balsa Fusion panels have gone through a UV fill and sand process, to fill most of the voids in the raw composite board materials used for our products. However, there will still be a few voids that need to be filled during the finishing step when fabricating for horizontal applications. **It is important to have a full fill finish to provide maximum protection of the surface when used in horizontal applications.**

Note: The 1/4" Balsa and Balsa Fusion panels are not rigid materials and have a certain amount of flex associated with it. Hence, this material is intended to be laminated to a substrate. The advantage is that it is somewhat flexible and therefore can be used in limited radial applications. The standard board can be applied to a 48" radius, however with additional sanding it can be applied on an even tighter radius.

Cutting

Material can be cut using standard carbon tip blades. Avoid feeding the material too fast to prevent binding or too slow to prevent burning.

Machining

Material can be routed using standard carbide router tips. Material can be hand routed or routed on a C&C machine. Also, standard V-groove units with carbide tips can be used for drop edge applications.

Following the fabrication process the material should be sanded (see below) before the coating process.

Sanding

We recommend that the material be very lightly sanded using a random orbital sander to a 220 grit finish. This will fully eliminate sanding marks left by the belt sanding process.

Care should be taken **NOT** to over sand the *Balsa Fusion* material. If too much material is sanded off, then the filler material that has been processed into the material to fill voids during a manufacturing step will be removed resulting in surface cratering. Though the Balsa Fusion material has gone through our fill and sand process, it will still contain a certain amount of unfilled areas or "voids" which we recommend filling in the coating process.

If material has been over sanded, no amount of sanding will eliminate or remove the voids associated with the material.

Gluing

Due to the water resistance of the material, the manufacturer does not recommend any moisture cure adhesive.

TorZo recommends using a solid surface epoxy or like product for edge gluing, including mitered edging, or seaming applications. Polyurethane type adhesives will also work well. Titebond II-III type adhesive products will also work but you need to allow for the longer dry times

TorZo recommends using a backer board for all horizontal applications using the Balsa and Balsa Fusion product. Liquid Nails, contact cement or a silicon adhesive will work great for this application.

Mitered/Edge Banding Edge Application

The 3/4" Balsa and Balsa Fusion materials can incorporate a mitered edge technique. CNC machines are great for this application, especially for larger jobs. The 1/4" Balsa and Balsa Fusion materials need to be edge banded or overlapped. There 1/4" thick material does not have enough surface area to be mitered.

A clear solid surface 2-part epoxy system can be used to glue the drop edge pieces together. The clear epoxy system actually takes on the color of the panels being glued and thus eliminates or minimizes glue lines. Polyurethane adhesive products will also work.

Under Mount Sealing/Installation Instructions

TorZo Surfaces **does not recommend** the Balsa product line for under mount sink applications. The porous nature of the material core makes the sealing of the exposed edges in water environments very tricky and difficult. TorZo Surfaces recommends top mounted sink applications instead for these product lines.

Sink & Faucet Sealing/Installation Instructions

Installing a top sink mounted bowl would be identical to installing the faucet. After cutting out the hole with the appropriate size cutting bit, apply a liberal amount of silicon caulking on the exposed edge and then install the sink bowl, faucet, etc.

Seaming Application

The Balsa surface product can be seamed. For seams finished in the fabrication shop, and using the recommended backer template, simply glue the two edge faces together using a solid surface epoxy that best matches the TorZo color product being used.

For cases where the seaming will be done at the installation site, then TorZo recommends using a "dry" seam technique. For these situations, TorZo recommends using a "dog bone" clamp assembly, similar to what is used for prefab counters tops, can be used to butt the edges up. After fabrication is complete, bring the edges together without applying any adhesive to the edges, sand the seamed area smooth and then complete the sealer and top coat spray coats. Once the fabricated piece has dried, it can be transported to the installation site in pieces and assembled on site.

Finishing

As mentioned above, the Balsa and Balsa Fusion materials may still have a few voids on the surface. It is important for horizontal applications, to provide a full fill finish in order to maintain maximum protection of the surface. These voids can be filled using best color wood filler (i.e. Famowood, DAP...) or best color match epoxy filler. The simplest and quickest method is to trowel the filler onto the surface and then sand smooth before applying the sealer and top coat system.

Before applying any coating, it is important to lightly sand and wipe the material clean with a damp rag using mineral spirits. This will remove residual sanding dust and other type particle. Typically, polyurethanes, conversion varnishes or lacquers can be used as the top coat.

TorZo recommends a minimum of two top coat applications for high wear applications such as countertops, vanities and tabletops.

Note: In order to ensure product performance, TorZo Surfaces requires a single coat spray application for the back or underside of any fabricated projects. The reason for this is two fold: During our manufacturing process, we make sure to keep the boards balanced. What we do to one side, we do to the other. This includes the sanding step as well as the fill and sand step, when applicable. Second, the idea is to seal all six sides, regardless of the application (low wear vertical or high wear horizontal).