TorZo Products Fabrication Guidelines 3.1

Fabrication Basics

Included in this document are guidelines for standard material machining techniques such as cutting, sanding, routering and gluing for the TorZo solid surface products.

We welcome suggestions from experienced fabricators as they work with the TorZo materials, and will incorporate new techniques and information in future updates.

Material Composition and Handling

All TorZo based boards (Indure, Orient, Seeta and Durum) are infused with an acrylic resin material that can be cut, machined and sanded with standard tooling. This is because even after the infusion process, the material composition is still over 65-75% wood or cellulose based.

Similar to other solid surface materials, including wood, rock, granite, and all other 100% acrylic resin based materials, we the manufacturer recommend that the fabricator wears a dust mask to prevent inhalation of any fine particles. The MSDS is available online at www.torzosurfaces.com or can be provided by the distributor.

Material should be kept flat at all times to prevent the introduction of "bowing" to the sheets.

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 direct contact with water, especially if the sheets do not have a finished top coat. This will prevent any potential discoloration due to water spot damage.

Material Properties

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

TorZo materials that are less than 1" thick have a certain amount of flex associated with the material sheets. Thus it is recommended that when fabricating tabletops and countertops with the thinner materials that the fabricator glued or screw the material to a ¾" plywood template backer board in order to insure a flat surface. This also significantly reduces the costs associated with the thicker (1" and greater) material.

Currently, sheets come standard in 36” x 10’ dimensions (Indure & Seeta) and in 36” x 8’ dimensions (Orient & Duram). They come from the manufacturer in the following forms;

Indure (MDF): sanded to 220 grit, both sides
Seeta (Sun Flower Seed Shell): UV filled and sanded to 220 grit
Orient (OSB): fill and sanded to 220 grit
Duram (wheat): filled and sanded to 220 grit

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

Following fabrication, use an orbital sander with 220 grit paper before applying a top coat.

Sanding

We recommend that the material be sanded using a random orbital sander to a 400 grit finish. This will fully eliminate sanding marks.

Care should be taken NOT to over sand the Seeta, Orient or Duram 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. Once this occurs the only way to eliminate these craters is to apply clear epoxy filler, followed by a sanding step.

If material has been over sanded, no amount of sanding will eliminate or remove the voids associated with the material. A clear epoxy resin application step is required to fill these voids.

Finishing

Before applying any coating, it is important to wipe the material clean with a damp rag using mineral spirits. This will remove residual sanding dust and other tope particle. TorZo recommends all of the coatings specified below. For polyurethanes and conversion varnishes, we recommend a minimum of three coats for high wear applications such as countertops, vanities and tabletops. Spray UV coatings requires a more complex spray system and hence is not an option in many cases. However, the UV coating material is probably the hardest coating material available. Also, the UV sprayed material is harder to fix in the field. Most any type of acrylic based coating can be applied successfully, however please check with manufacturer before applying. Just remembered, the harder the coating the better the wear.

Conversion Varnish: Chemcraft, Sherwin Williams, Valspar
Polyurethane: Sherwin Williams, Chemcraft
Urethane: Sherwin Williams, Tessa
UV Filler & Top Coat: Chemcraft

Gluing

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

Titebond II or II can be used for gluing all TorZo based materials. However for lighter based material colors, this glue appears darker after it dries and has a tendency to show glue lines. Hence, for V-groove application, a solid surface 2-part solid surface epoxy system that best matches the TorZo materials color is recommended. In addition, the epoxy systems dries within 15-30 minutes, which is faster than a Titebond II or III adhesive which requires a much longer cure time.

V-Grooving Application

All TorZo Surfaces solid surface products are capable of being V-grooved using standard V-Groove techniques used for V-Grooving any other type of solid surface acrylic surface materials.

A solid surface 2-part epoxy system that best matches the TorZo materials color is recommended to eliminate or minimize glue lines.

Seaming Application

The same seaming techniques that are used to seam solid surface acrylic based material can be applied to the TorZo solid surface materials. This includes using sheet material cut to specification, V-grooving as required using best color match acrylic epoxy, and using best color matched epoxy to glue the matching seamed edges with suction clamps. The seamed area is then lightly sanded to create a smooth flat seamed area. Care must be used to make sure not to over sand which can remove the UV fill coat, resulting in the reintroduction of voids into the material. NOTE: This is not an issue with the MDF based (Indure) material which does not contain any voids. Following this step, the fabricated piece must then be sprayed with an approved spray coating. Two to three coats are recommended for high wear applications.