

UltraBoard Aluminum™ Application Guide

Cutting

Circular Saws

UltraBoard Aluminum may be cut with standard table saws.

For best results, use a blade designed for cutting UltraBoard Aluminum.

The specifications are:

- Top grind inverted “V”
- Face grind hollow
- Tooth pitch 0.375” to 0.750”
- Side clearance 0.015” to 0.020”
- Clearance angle 2°
- Blade rpm 3500 to 4500
- Feed rate 40 to 60 fpm

You may also purchase an UltraBoard Aluminum saw blade from:

Arkansas Carbide Saw and Tool

(918) 626-3837

Let them know arbor and blade diameter.

Routers

Looking for cutter profiles?

[Click here to visit our cutter profiles page.](#)

Routing UltraBoard Aluminum works well for creating letters, logos, and irregular shapes. We recommend bits available from Onsrud Cutter, Inc. (847) 362-1560 and Vanguard Tool Corp. (276) 673-3496. Use Onsrud Cutter series 52-000 or Vanguard Tool part number VSC-102. Router bits should be double fluted carbide, upward chip removal, with a 1/4” shank diameter and a 3/16” cutting diameter. For best results run at 18,000 rpm and 85 inches/minute. Feed rate may be varied to compensate for larger bit diameter and different rpm. For special and long router bits for CNC routers, we recommend contacting Hartlauer Bits (541) 343-0390.

Laminating and Gluing

No special surface preparation is required when gluing to the face of UltraBoard Aluminum. The surface should be kept clean and free of any oil contaminants as with any other surface to be glued. Great care should be taken in choosing an adhesive. Some solvent-based adhesives will attack the styrene facer causing a small hole to develop thus allowing the adhesive to deteriorate the bond between the core material and the facer. This reaction could take up to several days to develop. Any adhesive should be thoroughly tested to evaluate its suitability. We recommend using Latex Liquid Nails for Foamboard, part number LN-604. This adhesive is available from most hardware stores.

Painting

UltraBoard Aluminum needs no special preparation before priming or painting. For best results the surface should be clean and free of any oil contaminants. This can be accomplished by cleaning the panel with glass cleaner or isopropyl alcohol just prior to coating. Caution should be taken when using oil base or solvent base systems, not to allow paint to make contact with the polystyrene core. These types of paints are likely to attack and deteriorate the foam core.

In cases where the foam edges might be subjected to exterior exposure, it will be necessary to protect the edges from deterioration by the high intensity ultra violet light of the sun. A good coating of water-base paint or similar U.V. barrier should be sufficient to provide this protection.

Caution should be taken with any paint, especially when intended for outdoor use. Always test paint on UltraBoard Aluminum prior to production run and follow all of the paint manufactures instructions.

Preventing Bowing

Bowing occurs when different conditions exist on opposite sides of the foam core board including temperature and coating applications. Potential for bowing is also much higher in thinner boards at larger sizes such as 4' x 8' sheets. Upon unpacking, panels that display bowing may be corrected by simply inverting the panel on a flat surface for up to 24 hours, allowing bowing to dissipate.

To insure maximum flatness in installation environments, it is ideal to utilize a thicker panel. If using a thinner panel, wood frames or extruded aluminum channels may be affixed to the sheet perimeters to maintain even tensioning.

If panels have a coating applied to more than 50% of one side's surface area, ideally the coating is equally applied to the opposite panel side to achieve equal surface tensioning, thus avoiding potential bowing.

Outdoor Use

UltraBoard Aluminum is not recommended for outdoor use.

Flammability

UltraBoard Core is flammable and may constitute a fire hazard. Do not expose to an open flame or other ignition source.