

# ULTRA CORE

THE RELIABLE, ECONOMICAL STANDARD

For temporary or light-duty uses, ULTRA CORE is the best choice available. It is both economical and well manufactured to provide you a quality foam-centered art board at an affordable price.

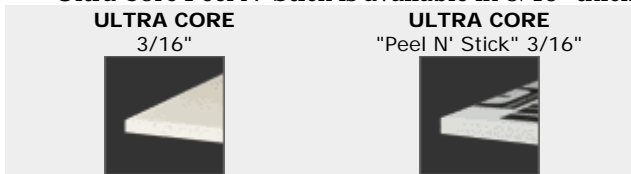
Don't be fooled by Ultra Core's low cost — it delivers many of the exceptional features of the other Ultra products. The panels are rigid and smooth, and are easily cut with a utility knife, razor or die. Ultra Core is ideal for mounting and framing photos and prints, and also works well for screen printing, temporary signs, architectural models, promotional displays and point-of-purchase sales.

Ultra Core Peel N' Stick is also available for quick and simple mounting of photos, prints or computer graphics — excellent for presentation materials.

Ultra Core and Ultra Core Peel N' Stick are made of white 12-pt clay-coated paper liners with a polystyrene foam center.

Ultra Core is 3/16" thick, standard sheet sizes are 32" x 40", 40" x 60" and 48" x 96", and can be custom-cut to your specifications.

Ultra Core Peel N' Stick is available in 3/16" thickness in 10 pre-cut sizes from 8" x 10" to 48" x 96".



# ULTRA CORE

TECHNICAL GUIDE



## GENERAL

ULTRA CORE graphic art board consists of a sheet of extruded polystyrene foam laminated on both sides with white clay coated paper. This lightweight material can be used for a wide variety of graphic arts applications including point-of-purchase displays, exhibits, signs, models, photo mounting and picture framing. Following are some general guidelines for working with ULTRA CORE graphic art board.

## CUTTING

### HAND CUTTING:

ULTRA CORE can be cut by hand with mat knives, utility knives and razor blades. In order to achieve a smooth, clean cut without foam tearing, the blade must be sharp and positioned at a minimal angle during cutting. A sharp blade also reduces friction and the amount of force needed to cut the board.

Commercially available mat or foam board cutters can provide straight, square and clean edges with one pass of the cutting blade. The best edge can be obtained when the blade is set at the correct angle and is as sharp and thin as possible.

The cleanest cuts can be achieved from hand operated or powered cutters that utilize replaceable razor blades.

## **POWER CUTTING:**

Rotary saws, band saws and scroll saws may provide an acceptable edge finish. The correct blade, blade speed, and feed speed required for a clean edge is dependent upon the quantity of boards being cut. It is recommended to pre-test any sizing method before committing to a production run.

Circular saws can be utilized to obtain clean cuts. The blade selected should be specifically designed for cutting foam boards. General Saw Corporation, 1-800-772-3691, makes thin rimmed, high-speed carbide-tipped plastic cutting blades that may produce acceptable results (72-80 25-degree alternating teeth on a 10" diameter blade.)

Band saw cutting may be performed with a straight knife or scalloped edge blades. Band saw blades with aggressive teeth can tear the paper and leave a hanging fray on the exit side of the cut. When cutting straight lines, wide blades tend to weave less than narrow blades thus producing a straighter edge.

Scroll saws or a Cutawl® Cutting Tool can easily provide curves and radii. The proper cutting blade is important in order to achieve clean edges. For scroll saws, thin premium double tooth blades can provide an excellent edge finish. Chisel point blades should be effective when utilizing a Cutawl®.

Routing and quillotine cutting are not recommended for ULTRA CORE.

## **DIE CUTTING:**

Die cutting can be accomplished by using a 3-point steel rule die with a long bevel. The ejection rubber used in conjunction with the die should be a hard rubber to produce a square edge, or a soft rubber for a closed edge.

When die cutting ULTRA CORE, the use of a straight edge die with a long bevel and a hard rubber will produce a square edge due to the memory effect of the board.

## **EMBOSSING**

Adding 3-dimensional effects onto ULTRA CORE may be accomplished by means of embossing or debossing. Using flat or rotary die presses, either lines or patterns may be impressed into the surface without using heat. This process can be done in conjunction with die cutting thus eliminating an additional operation.

## **PRINTING**

ULTRA CORE's white, clay-coated paper liners are chosen for their excellent screen printing characteristics, including fine line detail, good ink hold-out, and fast drying rates. Water-based, solvent-based, or UV inks are generally suitable. ULTRA CORE's smooth surface makes it ideal for any printing operation which can utilize rigid flat sheet stock. When using solvent based coatings on ULTRA CORE, it is important that the coating does not come in contact with the exposed foam on the edges of the board. When using water dispersion coatings on foam centered boards, it is important to cover both sides of the board in order to reduce bowing.

Allow 24 - 48 hours after test printing to evaluate the suitability of the ink for the intended application. Follow all of the ink manufacturers instructions.

## **PAINTING**

ULTRA CORE needs no special preparation before painting. For best results the surface should be clean and free of any contaminants. This is best achieved by simply wiping the surface with a dry cloth. ULTRA CORE can be painted with poster colors, acrylic paints, tempera, India ink and latex-based pigments. Caution should be taken when using oil based or solvent based systems, not to allow the paint to come in contact with the polystyrene core. These types of paints are likely to attack and deteriorate the foam core. The core may be required to be coated with water-based primer before solvent based paints can be used on the core.

When coating most of one side of a panel, the back side of the panel should also be coated to maintain more perfect long-term flatness. When possible, place weights at the edges when allowing the board to dry.

## **MOUNTING**

### **GENERAL:**

ULTRA CORE material can be mounted utilizing most conventional mounting techniques, provided the surface of the board is clean and free of dirt and dust. Cold mounting, dry mounting and spray adhesives work well on ULTRA CORE. To prevent any tendency of bowing when mounting, it may be necessary to apply a counter-mount of comparable strength on the backside. Always test adhesives on ULTRA CORE prior to a production run and always follow the manufacturer's instructions.

### **DRY MOUNTING:**

Dry mounting on ULTRA CORE may be accomplished with a heat press or combination heat/vacuum presses. Although many dry mount tissues may be used, a lower temperature mount is recommended. Press temperatures should range from 180°F. to 220°F. Residence time in the press should be no longer than 90 seconds.

### **PRESSURE SENSITIVE MOUNTING:**

Pressure sensitive adhesives, depending on the product used, may be used with or without press equipment. Care should be taken when using a roller press; excessive pressure may damage the core of the board. The following pressure sensitive films have shown excellent results when used on ULTRA CORE.

GBC (800) 723-4000

Artic Dura Mount

Artic Advance Mount

Seal (800) 966-4554  
Print Mount Ultra  
Print Mount One  
Print Mount Plus  
Optimount

Durotech Corp. (800) 827-1379  
Duromount E  
Duromount W  
Duromount U  
Duromount R

Drytac (888) 622-3236  
Media Tac  
Rubber Tac  
Sure Tac  
Media Tac White

Quality Mounting (800) 552-9427  
Mista Bond #8387M-96-44

## **STORAGE**

To reduce any tendency to bow, store boxes or sheets flat whenever possible. Store ULTRA CORE in the same environmental conditions as it will be used and avoid extremes of humidity and temperature.

## **FLAMMABILITY**

ULTRA CORE has a combustible thermoplastic core which will burn when exposed to a flame source. Do not expose this material to open flame or other ignition sources.

These tips for fabricating ULTRA CORE have been developed to assist fabricators to work the aforementioned product: These fabrication suggestions and product specifications are based on information which is in our opinion, reliable. However, sense skill, judgment, and quality of equipment and tools are involved, and since conditions and methods of using ULTRA CORE are beyond our control, the suggestions contained in this manual are provided without guarantee. We recommend that prospective users determine the suitability of both the material and suggestions before adopting them on a commercial scale. United Industries Incorporated, does not make any warranties, expressed or implied, including merchantability and fitness for purpose, with respect to any said suggestions and product data. In no event shall United Industries Incorporated, have any liability in anyway related to or arising out of said suggestions and product data for direct, special, consequential or any other damages of any kind regardless whether such liability is based on breach of contract, negligence or other tort, or breach of any warranty, expressed or implied.