



**Manufacturers of  
Precision Board**

P.O. Box 4875

Orange, CA 92863-4875

(714) 771.4969

(800) 845.0745

Fax: (714) 771.6422

Email: [hdu@precisionboard.com](mailto:hdu@precisionboard.com)

[www.precisionboard.com](http://www.precisionboard.com)

# Precision Board Plus™

## PBHT-15

### DESCRIPTION & APPLICATION:

PBHT-15 Plus is a rigid, High Density Urethane, (HDU), Tooling/Modeling board designed for Prototype Machining, Water Jet cutting, Pattern Making, Thermoforming, Prepreg Composite Layout Tooling, Vacuum Form Tooling, Tool Path Proofing, Lost Wax Casting Masters, Master Model Making, Artistic Carving Blocks, Indoor and Outdoor Signage. PBHT Plus is made in the USA.

Precision Board Plus PBHT is formulated with eco-friendly, "Green" urethane components. The new Plus material has a Certified "Carbon Foot Print" of 3 to 1 and a Certified "Rapidly Renewable Green Resource Content" of 11.9%. This means each 3"x 4'x8' sheet of PBHT-20 saves 19 pounds of plastic material which assists meeting LEED requirements for obtaining USGBC and ICC 700 building credits.

Precision Board Plus PBHT **does not contain: CFCs or VOCs.** See MSDS for details.

Precision Board Plus PBHT comes in standard sizes of 20"x60", 24"x60", 30"x80", 45"x60" 4'x8', 4'x10', 5'x8' and 5'x10'. Thickness ranges from 1/2" to 24". Custom bonded blocks available in any size. PBHT Densities are 15, 18, 20, 30, 34, 40, 48, 60, 70, & 75 pcf. Other densities available.

Precision Board Plus is **non-abrasive**, can be machined with HSS bits or cut with any standard cutting tool. PBHT's tight cell structure allows adjusting spindle speed & table feed to produce either chips or dust as desired. Check Coastal's on-line Onsrud Router Search guide for most efficient cutter bit for desired speeds & feeds. PBHT Plus does not outgas or affect prepreg resin cure.

**See FAQ for important oven/autoclave ramping procedures and other pertinent information. \*\***

PBHT can be bonded to itself or most other substrates using Coastal Enterprises' one part urethane adhesives: PB Bond-240 and PB Fast Set or EP-76, a two part, epoxy adhesive.

### PHYSICAL PROPERTIES:

|  |                               |                                      |
|--|-------------------------------|--------------------------------------|
| Density  | ASTM D-1623                   | 15 lbs/Cubic Foot                    |
| Compressive Strength   | ASTM D-1621                   | 570 psi                              |
| Compressive Modulus  | ASTM D-1621                   | 20,485 psi                           |
| Tensile Strength   | ASTM D-1623                   | 406psi                               |
| Tensile Modulus  | ASTM D-1623                   | 32,120 psi                           |
| Shear Strength   | ASTM C-273                    | 375 psi                              |
| Shear Modulus  | ASTM C-273                    | 3,895 psi                            |
| Flexural Strength Method 1A  | ASTM D-790                    | 506 psi                              |
| Flexural Modulus Method 1 A  | ASTM D-790                    | 16,256 psi                           |
| Hardness - Shore D   | ASTM D-2240                   | 46                                   |
| Elongation   |                               | 5.3%                                 |
| Dimensional Stability  | ASTM D-2126                   | 1.2% Max.                            |
| Water Absorption   | ASTM D-2842                   | 0.01% by Vol. after 96 hrs.          |
| Closed Cell Content  | ASTM D-2856                   | 97%                                  |
| "K" Value Insulation Factor  | ASTM C-177                    | 0.771                                |
| Impact Resistance  | 0°F 4.6 oz. 1" Dia. 9'6" drop | No cracking observed                 |
| Freeze Thaw  | ASTM D-2126, 25 Cycles        | No disbonding or distortion occurred |
| Mold and Mildew Resistance   | ASTM D-3273                   | Does not support growth              |
| Dielectric Constant  | ASTM D-1678                   | 1.3                                  |
| Maximum Service Temperature  | Dry                           | 300° F                               |
| Coefficient of Thermal Expansion (CTE)                                 |                               | 26 X 10 <sup>-6</sup> °F             |
| Glass Transition   | DMA/TMA                       | 284°F                                |
| Specific Heat  | ASTM E-1269                   | 0.235                                |
| Precision Board does not contain: Chlorinated Fluorocarbons (CFC's) or |                               | Volatile Organic Compounds (VOC's)   |
| Flammability Tests:  | FAR 25.853 Vertical Burn      | Pass                                 |
|  | MIL P 26514 Burn Test         | Pass                                 |
|  | ASTM D-1692-74 Burn Test      | Pass                                 |
|  | ASTM D635-06 Burn Test        | Pass                                 |

Follow heat temperature ramping of 1°F up per minute & 2°F down per minute. See FAQ for additional data.

**Any Questions please contact Coastal Enterprises Company**

**(800) 845-0745**

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**WARRANTY:** All recommendations for product use have been derived from experience and test data believed to be reliable. We warrant and guarantee the uniformity of our products within manufacturing tolerance. However, since the use of our products are beyond our direct control, they are furnished upon the condition that each party shall make his/her own tests to determine their suitability for his/her particular purpose. Except as stated herein, Coastal Enterprises Company makes no warranty or guarantee, expressed or implied, and disclaims all responsibility for results obtained, nor assumes any liability for any damages, whether arising out of negligence or breach of guarantee and is hereby expressly limited to replacement of product only. For additional information on product handling, please refer to Precision Board Plus MSDS.

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Product Data Sheet