



**Manufacturers of  
Precision Board**

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# Precision Board Plus™

## PBHT-18

### DESCRIPTION & APPLICATION:

PBHT-18 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	18 lbs/Cubic Foot
Compressive Strength	ASTM D-1621	869 psi
Compressive Modulus	ASTM D-1621	34,750 psi
Tensile Strength	ASTM D-1623	573 psi
Tensile Modulus	ASTM D-1623	57,625 psi
Shear Strength	ASTM C-273	478 psi
Shear Modulus	ASTM C-273	7,762 psi
Flexural Strength Method 1A	ASTM D-790	875 psi
Flexural Modulus Method 1 A	ASTM D-790	27,460 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