



**Polytek**<sup>®</sup>  
Development Corp.



## TEKBOARD™ TOOLING & MODELING BOARD



BCC Products, Inc. has recently joined Polytek<sup>®</sup> Development Corp. With over 25 years of experience in the manufacture of high-quality tooling and modeling board, BCC Products, Inc. board materials are known for their machinability, finish, and durability. [www.bccproducts.com](http://www.bccproducts.com) | [www.polytek.com](http://www.polytek.com)

# Tooling & Modeling Boards



**TekBoard™ Tooling & Modeling Boards** are pre-fabricated, highly machinable, dimensionally stable block materials that assist engineers, model makers, mechanical designers, and prototype developers in meeting the demanding needs of the aerospace, automotive, modeling, and prototyping industries.

The Polytek® portfolio includes varying densities of **urethane**, **aluminum-filled urethane** and **epoxy** board materials.

Choose the board material that's best for your application:



## APPLICATION GUIDE\*

TekBoard™ Product >	MB-2001	MB-3500	MB-4000	MB-5000	EB-6200	MB-8250
Models (e.g., Architectural)	Ideal	Acceptable	-	-	-	-
CNC Proofing	Acceptable	Acceptable	-	-	-	-
Foundry Patterns	Acceptable	Acceptable	Ideal	Acceptable	-	-
Vacuum-Forming	Acceptable	Ideal	Ideal	Acceptable	Ideal	Ideal
Metal-Forming	-	-	Ideal	Ideal	-	-
Tooling Aids & Fixtures	Acceptable	Ideal	-	-	-	Ideal
Master & Lay-Up Tools   Intermediate-Temperature	-	-	-	-	Ideal	Acceptable
Master Lay-Up Tools   High-Temperature	-	-	-	-	Ideal	-

## SPECIFICATION GUIDE

TekBoard™ Product >	MB-2001	MB-3500	MB-4000	MB-5000	EB-6200	MB-8250
Density (lb/ft³)	46.5	48	71	100	40	100
Color	Mahogany (Brown)	Gray	Red	White	Blue	Gray/Aluminum
Shore Hardness	D68	D71-75	D86	D86-90	D72	D85
Tensile Strength (psi)	3,800	6,525	10,890	7,655	ND	4,046
Flexural Strength (psi)	5,150	11,660	17,350	9,980	ND	6,766
Flexural Modulus (psi)	154,200	337,200	428,300	685,000	ND	612,155
Impact Strength (IZOD)	1.92	ND	0.85 (notched), 21.96 (un-notched)	ND	0.56 (notched), 1.05 (un-notched)	1.36 (notched)
Coefficient of Thermal Expansion (in/in)	4.68 x 10 <sup>-5</sup>	29 x 10 <sup>-6</sup>	25-28 x 10 <sup>-6</sup> (-22°-86°F)	2.29 x 10 <sup>-5</sup>	19.4 x 10 <sup>-6</sup>	39.2 x 10 <sup>-6</sup>
Heat Deflection Temp. (°F)	172	200	214	195	275	175
Glass Transition Temp. (°F)	ND	215	240	215	>305	ND

**DISCLAIMER:** The information in this bulletin and otherwise provided by Polytek® Development Corp. is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained by the use thereof, or that any such use will not infringe any patent. Before using, the user shall determine the suitability of the product for the intended use and user assumes all risk and liability whatsoever in connection therewith.

\*Results and suitability may vary. ND = Not Determined.

## Polyurethane Board



### TekBoard™ MB-2001 | Model Board

is a dense, brown colored urethane board with a ~46 lb/ft<sup>3</sup> density. MB-2001 is a highly machinable board, providing a highly defined surface finished. This board is a great choice for master models, various prototypes, short run foundry patterns, and design models.

Density: 46 lb/ft<sup>3</sup> | Color: Brown



### TekBoard™ MB-3500 | Tooling Board

is a gray colored urethane board with a ~48 lb/ft<sup>3</sup> density. MB-3500 can replace aluminum and other metals for checking, holding, and assembly fixtures, short run foundry patterns, various prototypes, and design models.

Density: 48 lb/ft<sup>3</sup> | Color: Gray



### TekBoard™ MB-4000 | Foundry Board

is an extremely tough, red colored urethane board with a ~71 lb/ft<sup>3</sup> density. MB-4000 is a high-impact urethane that can replace aluminum and other metals in core boxes, stretch forming, foundry patterns, and short run metal stamping, as well as various prototypes and models. MB-4000 has a smooth surface that makes it ideal for vacuum forming clear parts.

Density: 71 lb/ft<sup>3</sup> | Color: Red



### TekBoard™ MB-5000 | Metal-Forming Tooling Board

is a high-wear, white colored urethane board approximately with a ~100 lb/ft<sup>3</sup> density. MB-5000 is a high wear, high impact, urethane board that can be used for metal forming as well as nickel plating mandrels.

Density: 100 lb/ft<sup>3</sup> | Color: White

## Aluminum-Filled Polyurethane Board



### TekBoard™ MB-8250 | Aluminum-Filled Tooling Board

is a metal-like, aluminum-filled gray colored urethane board approximately with a ~100 lb/ft<sup>3</sup> density. It is dimensionally stable and exhibits excellent machinable properties. MB-8250 tooling board will show a significant savings on billet aluminum tooling materials.

Density: 100 lb/ft<sup>3</sup> | Color: Gray/Aluminum

## Epoxy Board



### TekBoard™ EB-6200 | High-Temperature Epoxy Tooling Board

is a high-temperature blue colored epoxy board with a ~39 lb/ft<sup>3</sup> density. EB-6200 was developed to meet the needs of the aerospace, motor sport, and automotive industries. This board material has excellent cutting performance, high heat resistance, and low coefficient of thermal expansion, making it ideal for master models, lay-up tools for pre-pregs, and other applications where a temperature-stable tool is required.

Density: 39 lb/ft<sup>3</sup> | Color: Blue

**TEKBOARD™ MACHINING PARAMETERS\*\***

TekBoard™ Product >	MB-2001	MB-3500	MB-4000	MB-5000	EB-6200
Roughing Speed (RPM)	1500-2000	1500-2000	1500-2000	1500-2000	1600
Roughing Feed (IPM)	80-100	50-70	50-70	50-70	40
Roughing Cutters	1/2" Ball End Mill 4 Flute Carbide	1/2" Ball End Mill 4 Flute Carbide	1/2" Ball End Mill 4 Flute Carbide	1/2" Ball End Mill 4 Flute Carbide	1" Ball End Mill 2 Flute Carbide
Finishing Speed (RPM)	10000-12000	3200-6000	3200-6000	3200-6000	10000
Finishing Feed (IPM)	150-200	100-200	100-200	100-200	100
Finishing Cutters	1/2" Ball End Mill 4 Flute Carbide	1/2" Ball End Mill 4 Flute Carbide	1/2" Ball End Mill 4 Flute Carbide	1/2" Ball End Mill 4 Flute Carbide	5/8" Ball End Mill 4 Flute Carbide

\*\*Machining parameters can vary depending on a variety of factors. User must determine the correct parameters for the application.

**TEKBOARD™ SIZES**

TekBoard™ Product >	MB-2001	MB-3500	MB-4000	MB-5000	EB-6200	MB-8250
1x24x60	●	●	●	●		●
2x16x60	●	●	●	●		●
2x24x60	●	●	●	●	●	●
3x16x60	●	●	●	●		●
3x24x60	●	●	●	●		
4x16x60	●	●	●			
4x24x60	●	●	●		●	
5x16x60		●				
5x24x60	●	●	●			
6x16x60	●	●				
6x24x60	●	●	●		●	

**Accessories:**

- BP-9024 | [Epoxy Adhesive \(5-Minute Working Time\)](#)
- BC-5003 | [Epoxy Adhesive \(15-Minute Working Time\)](#)
- BC-6250 | [Epoxy Adhesive & Repair Paste for EB-6200](#)
- BC-5105 | [Epoxy Adhesive for High-Temp Applications \(up to ~150°F\)](#)

**Other Polytek® Tooling & Prototyping Materials:**

- [Urethane Resins](#)
- [Urethane Elastomers](#)
- [Urethane Foams](#)
- [Silicone Elastomers](#)
- [Epoxy Resins](#)