



Freeman T-5060 High Temperature Epoxy Board

Description

The Freeman T-5060 (formerly Renshape BM-5060) is a high-performance epoxy tooling board that offers exceptional machinability, a very fine surface structure, high dimensional stability, and notable heat resistance. Able to withstand up to 284F with post cure (see below), this board is well suited to applications such as high temperature curing prepreg, draping tools for prepreg, and master models.

Physical Properties

Color	Blue
Hardness (Shore D)	75
Density (g/cc)	0.72
Density (lb./ft. ³)	45
Compression Strength (psi)	9,790
Flexural Strength (psi)	5,366
Deflection Temperature (°F)	284*
Coefficient Thermal Expansion (in/in/°F)	19.5 x 10 ⁻⁶

***Post-cure of parts on Freeman T-5060 tools:** The temperature differential (delta T) between the center of the tool and the external surface must never exceed 50°F on either ramp up or cool down. To achieve this, a temperature soak of 6 hours every 50°F up and down in the oven and temperature ramp rates of no more than 1°F/min are recommended, but if the temperature differential would exceed 50°F then these parameters need to be adjusted until it does not. Leave the tool in the oven for at least 6 hours below 100°F before opening the doors and exposing the tool to room temperature conditions.

Machining

Machining parameters listed are starting points. Cutter type, material, spindle speed, feed rates, and other factors will determine machining results.

Roughing Speed	Roughing Feed	Finishing Speed	Finishing Feed
1,600 RPM	40 IPM	10,000 RPM	100 IPM

Cutters: **Roughing** 1" Ball End mill, 4-Flute, Carbide
 Finishing 5/8" Ball End mill, 2-Flute, Carbide

Depth: **Roughing** Varies from 1/4" to 2-1/2" deep with 40% stepover
 Finishing 1/8" deep leaving 0.002" scallop height

The user shall determine the suitability of this product for their application and assumes all risks and liabilities associated with the use of this product. The exclusive remedy for all proven claims is replacement of our materials only and in no event shall Freeman Mfg. & Supply Co. be liable for special, incidental, or consequential claims.

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