



Freeman M-4000 Modeling Board

Description

Freeman M-4000 is an ideal material for models and prototypes, master patterns, and tooling aids. This material will produce very stable, dimensionally accurate tools with well-defined edges and surface detail.

Physical Properties

| | |
|--|-----------------------|
| Color | Brown |
| Hardness (Shore D) | 62 |
| Density (g/cc) | 0.64 |
| Density (lb./ft. ³) | 40 |
| Compression Strength (psi) | 3,989 |
| Flexural Strength (psi) | 3,989 |
| Deflection Temp. (°F) | 199 |
| Tg (°F) | 225 |
| Coefficient Thermal Expansion (in./in./°F) | 31 x 10 ⁻⁶ |

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 |
|----------------|---------------|-----------------|----------------|
| 2,000 RPM | 100 IPM | 15,000 RPM | 200 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.