FREEMAN

Technical Data Sheet

# Freeman M-4400 Modeling Board

## Description

The Freeman M-4400 board is ideally suited for prototype vacuum-forming tools, styling prototypes, master models, tooling aids and automotive die models.

## Physical Properties

| | |
|---|---|
| Color | Light Brown |
| Hardness (Shore D) | 69 |
| Density (g/cc) | 0.72 |
| Density (lb./ft.$^3$) | 44 |
| Compression Strength (psi) | 4,714 |
| Flexural Strength (psi) | 3,989 |
| Deflection Temp. (°F) | 180 |
| Coefficient Thermal Expansion (in./in./°F) | 26 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