



Freeman Mfg.
& Supply Co.
1101 Moore Rd
Avon, OH 44011

Phone 800 321 8511
Fax 440 934 7200

www.freemansupply.com

www.freemanwax.com

RenShape 474

Polyurethane Fixture Board

Description

RenShape 474 is a gray colored polyurethane board that is manufactured to machine well, with good detail, and produce less dust than other board materials. It is ideal for creating economical check fixtures, trim fixtures, and drill fixtures.

Preliminary Physical Properties

	<u>Cured Value</u>	<u>ASTM Method</u>
Color (when mixed)	Gray	Visual
Hardness (Shore D)	73	D-2240
Density, g/cm ³ (lbs/ft ³)	0.8 (50)	D-792
Heat Deflection Temperature, °F	195	D-648
Glass Transition Temperature, °C	110	DMA
Coefficient of Thermal Expansion, in/in/°F	2.65 x 10 ⁻⁵	TMA
Izod Impact, Notched (Unnotched), ft-lbs/in	1.15 (13.26)	D-256
Tensile Strength, psi	6,750	D-638
Flexural Strength, psi	8,000	D-790
Flexural Modulus, psi	325,000	D-790
Compressive Strength	8,000	D-695
Compressive Modulus @ 25°C, psi	227,000	D-965

These physical properties are reported as typical test values obtained by our test laboratory. If assistance is needed in establishing specifications, please consult with our Product Management Department.

Machining

The following speed and feed conditions are recommended as starting points. Adjust speed and feed to your specific conditions.

<u>Roughing Speed</u>	<u>Roughing Feed</u>	<u>Finishing Speed</u>	<u>Finishing Feed</u>
1,600 RPM	40 IPM	10,000 RPM	100 IPM

Cutters:

Roughing = 1" Ball End Mill, 2-Flute, High Speed Steel (Min. of 8% Cobalt Suggested)

Finishing = 5/8" Ball End Mill, 4-Flute, Carbide

Depth:

Roughing = 1/4" to 2" deep with a 40% step over

Finishing = 1/8" deep leaving 0.002" scallop

Safety: Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

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