



MP-1075 INTERMEDIATE TEMPERATURE MODEL PLANK®

PRODUCT BULLETIN



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DESCRIPTION:

Model Plank® MP-1075 is a higher temperature urethane tooling and model plank designed to be heat resistant up to 225°F (107°C). Its excellent tensile and compressive strength combined with its high temperature characteristics make the MP-1075 excellent for aerospace masters and lay-up tools, prototype foundry patterns and prototype vacuum-forming molds. **MP-1075 Model Plank®** is well suited for forming large dimensionally accurate models where a higher processing temperature will be utilized.

HANDLING CHARACTERISTICS:

Color.....	Cream
Hardness @ 75°F.....	82 Shore D
Density	49.5 lbs/ft ³
Flexural Strength.....	9,495 psi
Flexural Modulus.....	418,000 psi
Tensile Strength.....	8,453 psi
Compressive Strength.....	14,040 psi
Compressive Modulus.....	425,000 psi
Izod Impact Strength.....	4.59 ft lbs/in
Heat Deflection Temperature @ 66 psi.....	241°F/116°C
Heat Deflection Temperature @ 264 psi.....	232°F/111°C
Tg by TMA.....	296°F/147°C
Coefficient of Linear Thermal Expansion (from 25°C to 100°C).....	44.4 x 10 ⁻⁶ in/in/°C

High Temperature Adhesive System EL-336 R/H
Patch Paste..... P-75 with White Cream Hardener

Standard Size Available: 2", 3", 4" T x 16"W x 60"L

STORAGE: Store all Tooling Planks on a flat surface at 60°F-100°F.

RECOMMENDED CNC MACHINING INFORMATION

(Carbide Cutters are highly recommended)

	Inches per minute (Feed IPM)	Plunge (mm)	Spindle Speed (rpm)
2" E-Mill for Roughing	100	25	6000
3/4" Ball	75	20	3000+
1/2" Ball	60-75	10-20	3000+
1/2" x 1/32" R	40	20	4000
1/4" Ball	60	10-20	5000

These are possible recommendations. There may be some variance depending on cutters and CNC mill capabilities.

CUTTING SUGGESTIONS FOR TOOLING PLANKS

CUTTING HORIZONTALLY ON A PLANNER MILL: Head is a 10 insert, 8" in diameter. For best results use 5 inserts. Inserts are SFE-42E-10J-C5. We have found a C2 Carbide insert does not chip as easily. RPM 2200-2400 – table feed 50-55 inches per minute. Some modifications may be needed.

SAW BLADES: A carbide-tipped, positive rake saw blade with air slots should be used, if possible. We suggest alternate top bevel ATB or triple chip grind TCG rpm, depending on the saw. We suggest 3,500 max rpm. Check with manufacturer on saw and blade size.

- 12" blade, 48 teeth
- 16" blade, 48 teeth
- 18" blade, 60 teeth

When sawing, you may need to back part away from blade to relieve heat and binding, then proceed with cut. It may be necessary to take more than one cut to achieve best finish.

MP-1075 Tech/Revised 10/28/09
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