



BUILDING TRUST



LAB 975 NEW

Technical Data Sheet

Epoxy Tooling Board

Master Models – High Temperature Lay-up Tools

Density 44 lbs/ft³ (0.71g/cc), T_g 266°F (130°C), Very Low CTE

DESCRIPTION

LAB 975 NEW is an epoxy tooling board suitable for epoxy prepregs or high temperature lay-up tools or parts and short run thermoforming applications.

APPLICATIONS

- Thermoforming tools
- Master models
- Curing prepreg
- Curing wet lay-ups

PROPERTIES

- High temperature resistance
- Medium density
- Excellent surface aspect
- Easily machined
- Easily polished
- Low CTE

PHYSICAL PROPERTIES		
	Test Method	Test Results
		LAB 975 NEW
Composition		Epoxy
Color	Visual	Light green
Density at 77° F (25° C) lbs./ft. ³ (g/cm ³)	ISO 2781 :88	44 lbs./ft. ³ (0.71g/cc)

MECHANICAL AND THERMAL PROPERTIES AT 74° F (23° C)			
	Test Method	Units	Test Value
Hardness:			
74°F – (23°C)			75
176°F – (80°C)			73
212°F – (100°C)	ISO 868 : 2003	Shore D	72
248°F – (120°C)			71
266°F – (130°C)			68
Flexural strength	ISO 178 : 2001	psi (MPa)	5,365 (37)
Flexural modulus	ISO 178 : 2006	psi (MPa)	333,500 (2,300)
Compressive strength	ISO 604 : 97	psi (MPa)	7,252 (50)
T _g	ISO 11359 : 2002	°F (°C)	266 (130)
Coefficient of linear thermal expansion (C _L TE) 50 – 212°F (10 – 100°C)	ISO 11359 : 1999	In/in/°F (°C)	19.4-22.2x10 ⁻⁶ in/in/°F 35-40x10 ⁻⁶ in/in/°C

Following these results, LAB 975 NEW can be used up to 266°F (130°C) maximum temperature for curing prepregs in autoclave at 59 psi (4 bars) pressure.

ASSEMBLY

In the US the recommended adhesive for bonding Axson LAB 975 NEW is EL-336 laminating resin

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MACHINING PARAMETERS

	Cutter edge velocity (Vc in ft/min (m/min))	Feed per tooth (fz in inches (mm)/revolution)
Rough cut ⁽¹⁾	328 – 1312 (100 – 400)	0.014 (0.35)
Finishing cut ⁽²⁾	1312 – 2625 (400 – 800)	0.002 – 0.006 (0.05 – 0.15)

$$n = (12 \text{ English or } 1000 \text{ metric}) \times Vc / (\pi \times Dc)$$

$$Vf = n \times fz \times Z$$

- Vc: Cutter edge velocity in ft/min (m/min)
- Dc: cutting diameter in inches (mm)
- n: Spindle speed in revolution/min
- fz: Feed per tooth in inches (mm)/revolution
- Z: number of teeth
- Vf: feed speed in inches (mm)/min

(1) **Rough cut:** Cutting parameters are determined with a carbide-insert ball nose end mill:

- Helix angle: 6°
- Clearance angle: 14°

(2) **Finishing cut:** Cutting parameters are determined with a 2 teeth ball nose end mill:

- Helix angle: 30°
- Clearance angle: 14°

STORAGE CONDITIONS

- Product is guaranteed for 12 months stored flat in a dry place.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :

- Ensure good ventilation
- Wear gloves, and safety glasses.

For additional information, please consult the Safety Data Sheet (SDS).

DISCLAIMER

The information contained in this technical data sheet results from research and tests conducted in our laboratories under precise conditions. Seller cannot anticipate all conditions under which seller's products, or the products of other manufacturers in combination with seller's products, may be used. It is the responsibility of the user to determine the suitability of the SikaAxson's products, under their own conditions, before commencing with the proposed application. In no event shall SikaAxson US be liable for any direct, indirect, punitive, incidental, special, and/or consequential damages, to property or life, whatsoever arising out of or connected with the use or misuse of our products.

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