

## EPOXY TOOLING BOARD STABILITY FOR HIGH TEMPERATURE TOOLS

### APPLICATIONS

Master models for the making of composite prepregs moulds or parts with or without autoclave, or vacuum forming moulds of plastic parts for low series.

### PROPERTIES

- High dimensional stability
- Easy machining with majority of flakes
- High-temperature lay-up tools
- Low specific gravity
- High temperature resistance

PHYSICAL PROPERTIES		
Composition	-	Epoxy
Colour	-	Blue
Specific gravity at 23°C	ISO 2781 : 88	0.75

MECHANICAL AND THERMAL PROPERTIES AT 23°C			
Hardness	ISO 868 : 85	Shore D1	73
Flexural strength	ISO 178 : 93	MPa	30
Flexural modulus	ISO 178 : 93	MPa	2,200
Compressive strength	ISO 604 : 97	Mpa	50
Coefficient of linear thermal expansion (CLTE) [+10, +100]°C	T.M.A.-Mettler	10 <sup>-6</sup> .K <sup>-1</sup>	35 - 45
Thermal conductivity	ISO 22007-1 :2009	W /m.K	0.14

Temperature (°C)		23	80	100	120	130
Hardness Shore D à 1 s	ISO 868 : 85	73	71	69	66	63

Owing these results, LAB 973 could be use until a temperature of 125° C for prepreg curing with 4 bars pressure in autoclave.

### ASSEMBLY

Sika Advanced Resins tooling board LAB 973 should be bonded with matched adhesive system H 8973 (about 530g/m<sup>2</sup>).

### SAFETY PRECAUTIONS

Normal health and safety precautions should be observed when handling this product:

- ensure good ventilation,
- wear gloves and safety glasses.

For further information, please consult the product safety data sheet.

MACHINING PARAMETERS		
	Cutting speed (Cs in m/min)	Feed per tooth (mm/tr)
Roughing cut (1)	100 to 400	0.35
Finishing cut (2)	400 to 800	0.05 to 0.15

(1) **Roughing cut:** Cutting parameters are determined with a carbide inserts ball nose endmill:

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

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

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

Surface painting is recommended: EC 85 AXSON

## STORAGE

The slabs must be stored in a dry place provided.

## DIMENSIONS

1.500 x 500 x 50 mm

1.500 x 500 x 100 mm

1.500 x 500 x 75 mm

Other larger dimensions possible in Mass Casting MC 973 (please contact us).

## GUARANTEE

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