EPBOARD 0700
Epoxy Tooling Board

APPLICATIONS

EPBORAD 700 is a high temperature resistance epoxy tooling board, especially suitable for the making of patterns for epoxy prepregs moulds in autoclave process, heat curing composite tools and vacuum forming moulds. It could also be directly used for the mould making of short run composite parts.

FEATURES

- High dimensional stability
- Easy machined
- High temperature resistance
- Low density
- High toughness
- Good edge stability
- Low CTE
- Good surface aspect

PHYSICAL PROPERTY

Product	**EPBOARD 0700**
Color	Blue
Density	0.70-0.75 g/cm^3

MECHANICAL PROPERTY

Property	**Test standard**	**EPBOARD 0700**
Hardness	ISO 868 : 2003	Shore D 72
Heat distortion temperature	DIN EN ISO 75B	130 ℃
Flexural strength	EN ISO 178	36 MPa
Flexural modulus	EN ISO 178	2100 MPa
Compressive strength	EN ISO 604	50 MPa
Tensile strength	EN ISO 527-1	23 MPa
Tensile modulus	EN ISO 527	2400 MPa
Impact strength	EN ISO 179	5.3 KJ/m^2
Coefficient of linear thermal expansion	EN ISO 113590-2	39* 10^{-6} K^{-1}

Temperature (℃)	23	80	100	130	150
Shore D Hardness	72	70	68	66	55

PROCESSING GUIDELINES:

Bonding of boards:

1. Cut, prepare and dry assemble blocks.
2. Both surfaces of the joint should be sanded with 320 grit paper.
3. Blow off the dust with compressed air and then use a suitable solvent such as acetone to remove any contaminants from the surfaces to be bonded.
4. Allow any residual solvent to evaporate before bonding.
5. Apply around 600 gram epoxy adhesive evenly across both surfaces of the joint with a castellated spreader.
6. Assembly the two wet surfaces and apply an even amount of pressure until the adhesive starts to expel from the joint. Remove the excess adhesive and check the joint for uniform thickness and that it does not exceed 1mm.
7. Boards should be held in position by light clamping or placing a weighted object over the entire top surface of the stack to ensure equal pressure throughout the board.
8. Always allow adequate time for the adhesive curing to further machining.
9. A post cure is recommended in order to achieve the systems maximum thermal characteristics. It is recommended to cool the part to room temperature in autoclave at the decrease temperature of no more than 20℃ per hour. This will prevent thermal shock from occurring to the board and the adhesive, which will result in poor bond and stress cracking in the board.

Supporting:

The tooling board should be adequately supported to avoid any excessive gravity induced stresses. For large patterns it is recommended that a steel support frame is used to minimize deflections and ease handling. Use one of the recommended adhesives for attaching back up or framing structures to the tooling board. Caution should be taken when making mechanical attachments to higher temperature boards as variations in coefficients of thermal expansion may cause warping or micro cracking when subjected to heating and cooling.

AVAILABLE BOARD DIMENTIONS

1500*500*50mm
1500*500*75mm
1500*500*100mm

HANDLING PRECAUSIONS:

It should be processed at well-ventilated room; avoid to contact with skin during machining process; wear gloves, mask, safety glass and protective clothing.
For further information, please consult material safety data sheet.

NOTE:

The data above is tested at specific conditions. Processing procedure and conditions might vary in practical applications, therefore it is recommended to carry out tests where necessary before using the product, and to ensure the product could meet the actual requirement. We at EPTEK guarantee that our products meet our highest quality management regulations.