High quality epoxy tooling board

EP700

Trelleborg EP700 is a medium temperature, low density syntactic epoxy tooling board designed for the manufacture of accurate and stable master models.

Applications:

EP700 can be used for the following:

- Master models.
- Lay-up tools for low and medium temperature curing epoxy prepregs.
- Light weight coring materials.

Features & Benefits:

EP700 fulfils the need for a cost effective advanced tooling material.

- **Excellent dimensional stability**
  Maintains shape at elevated temperatures.
- **Low coefficient of thermal expansion**
  Consistent, predictable performance.
- **Inert surface**
  Chemically compatible with tooling prepregs.
- **Suitable for use up to 130 °C**
  Can be directly used for the production of parts.
- **Easy to use**
  Quick mold preparation, exceptionally easy to machine or hand carve.

TECHNICAL PROPERTIES		
PROPERTY	TYPICAL DATA	TEST METHOD
Color	Pink	
Density	790 kg/m³	
Shore Hardness	75 D	
Uniaxial Compressive Stress	54 MPa	BS EN ISO 604
Glass Transition Temperature	127 °C	BS EN ISO 11359-2
Coefficient of Thermal Expansion	42 x 10-6 / °C	BS EN ISO 11359-2

Product Sizes

EP700 is available in a standard board size of 24” x 60” at the following thicknesses: 2”, 3”, 4” and 6”.

	Length	Width	Thickness
Type 1	24” / 610mm	60” / 1,524mm	2” / 50.8mm
Type 2	24” / 610mm	60” / 1,524mm	3” / 76.2mm
Type 3	24” / 610mm	60” / 1,524mm	4” / 101.6mm
Type 4	24” / 610mm	60” / 1,524mm	6” / 152.4mm

Storage

The board should be stored in a dry warehouse.

Health & Safety

Eye protection and a face mask should be worn when working with Trelleborg EP700.
Please refer to the Trelleborg MSDS.

Cutting Guidelines

EP700 can be sawn using carbide or diamond coated saw blades or cutting wheels.

Bonding Guidelines

Large patterns can be constructed from boards using the appropriately selected epoxy adhesive system. Trelleborg adhesive system 551A/B is recommended. The adhesive system must offer adequate pot life and be capable of meeting the mechanical and thermal properties of the tooling board.

To ensure good bonding:

- The adhesive should be applied to both surfaces (dust free) using a notched spatula.
- The surfaces should be brought together and a uniform clamping pressure applied by either mechanical or vacuum means.
- Any surplus adhesive that extrudes from bond lines after curing can be machined off.
- Bonded joints should be left to cure for 24 hours at ambient temperature for best results.

The recommended adhesive has matched characteristics to the EP700 material.

Machining Advisory

In order to avoid board distortion it is recommended that stock removal should be taken equally from opposing faces. Where this is not possible, then the board should be supported by and bonded to additional layers.

To minimize distortion when machining large flat boards, it is advisable to rough cut one face, invert the board and machine the rear face, re-invert and complete the machining. The board can be finished by the use of successively finer grades of wet and dry abrasive paper.

Machining Guidelines

The machining information provided is for guidance purposes only. It is advised that individual users should determine the appropriate speeds, feed, cutters and depths for their own specific application.

TYPICAL PROPERTIES	
Roughing Speed	5,000 rpm
Roughing Feed	9 m/min
Cutter Type	40 mm Ball Nose Cutter
Step Down	10 mm
Step Over	15 mm
Finishing Speed	7,500 rpm
Finishing Feed	9 m/min

Contact Us

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