



ebalboard VP EP 180

Getting results much faster: Direct tooling with ebalta's latest epoxy board development

When customers only want a limited number of carbon fibre parts there are only a few limited choices.

Option 1: make a master pattern using conventional epoxy tooling boards and produce a carbon fibre tool using low temperature carbon fibre pre preg.

Option 2: make a direct tool from existing epoxy board solutions with the knowledge the tool will need to be substantially repaired or even completely remade.

EP VP 180 from ebalta seeks to satisfy the demands of limited production runs without incurring expensive secondary processing.

During testing of the EP VP 180 Neil Walker, Managing Director of Penta Pattern & Model Limited, stated "The potential offered by this board is a real step change in direct moulding of carbon fibre pre preg. Now we have the ability to offer our customers multiple parts from an epoxy board tool knowing we have the confidence to manufacture without experiencing tool failure and incurring extra costs and a delay in lead time".

The number of parts produced depends on the complexity of the part and processing techniques. During testing a complicated heat shield produced in excess of 15 parts in a pre preg cured on the tool at 135°C.



Material	ebaboard VP EP 180
Colour	green
Applications	<ul style="list-style-type: none"> • Direct tooling • Composite moulds • Prepreg tools • Vacuum forming tools
Properties	<ul style="list-style-type: none"> • very fine surface structure • very high heat resistance • low coefficient of thermal expansion • good dimension stability • low generation of dust during machining
Processing data	
Flexural strength EN ISO 178 MPa	38 ± 4
Flexural modulus EN ISO 178 MPa	1770 ± 100
Impact resistance (Charpy) EN ISO 179 (kJ/m ²)	5.10 ± 0.6
Compressive strength EN ISO 604 MPa	49 ± 0.9
Shore hardness DIN ISO 7619-1 Shore D	72 ± 3
Heat resistance (HDT) DIN EN ISO 75 B (°C)	174 ± 3
Glass transition temperature Tg DSC (°C)	174 ± 3
Coefficient of thermal expansion internal test / Dilatometer (10 ⁻⁶ K ⁻¹)	approx. 56
Sales units (packages)	
ebaboard VP EP 180	1524 x 609 x 50 mm 1524 x 609 x 75 mm 1524 x 609 x 100 mm 1524 x 609 x 125 mm 1524 x 609 x 150 mm

Processing instructions

Advice for machining of board material

- Maintain even milling support
- Rough out geometry
- Remove clamps, if possible allow to relax over night
- Clamping
- Finishing

In General

ebaboard material is available in specified sizes. The surface is machined on all sides. ebalta is a synthetic, post-cured board material on epoxy

base. It has an even structure and plane parallel machined surfaces.

Advantages:

- Dense structure
- Good edge strength
- Low strain
- Good workability
- Low dust development when milling

Dimension tolerances of 3 mm in length and width and 0,5 mm in thickness are possible. Products labeled "VP" are trial products. Technical properties might change slightly.

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www.ebalta.com
 info@ebalta.com
 Tel.: +49 98 61/7007-0