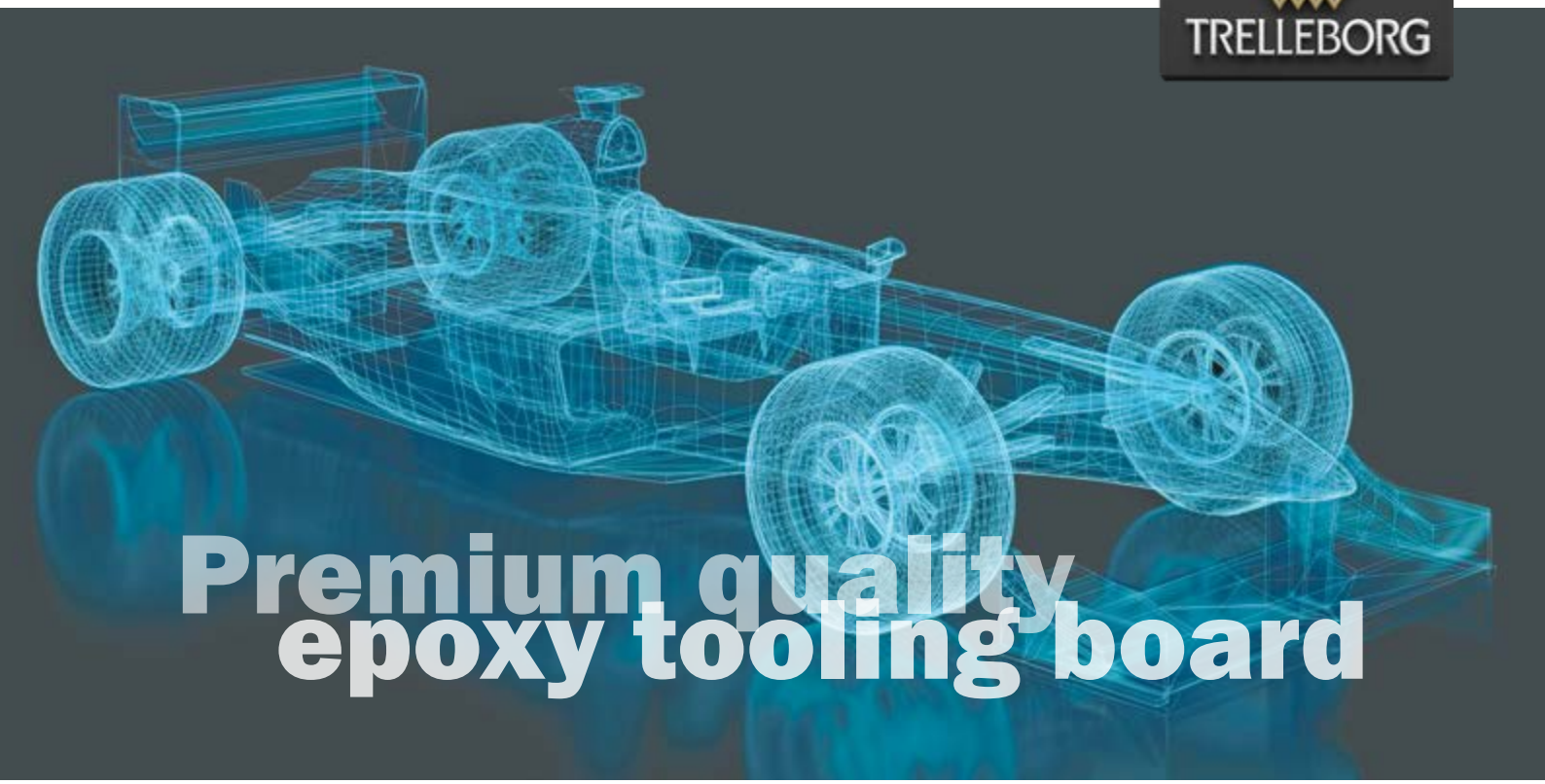


Premium quality epoxy tooling board

TC760X

As part of its ongoing commitment to supporting the environment, Trelleborg's latest tooling board the TC760X provides a dust free machining experience reducing airborne particles and environmental impact, and improving production efficiency.

Traditional manufacturing of tooling boards for creation of durable, reusable tools, prototypes and models can cause a large amount of dust to build up, increasing machine downtime and creating additional environmental concerns.

Applications:

The TC760X can be used for the following:

- Master models and direct to part tooling.
- Lay-up tools for low and medium temperature curing epoxy prepregs.

Features & Benefits:

TC760X is a premium quality tooling board offering a wide range of benefits:

- **Dust free machining**
  Excess product comes off in large flakes rather than dust, significantly reducing residue on machinery.

- **A-class surface finish**
  Can be machined to a high-quality surface that requires virtually no secondary finishing or polishing before use.

- **Suitable for operation temperature use up to 135 °C ***
  Ensures good compatibility with intermediate temperature curing prepreg.

- **Excellent toughness and durability**
  Maintains its shape at elevated temperatures with minimal edge chipping.

- **Consistent, reliable performance**
  Tools are durable and tough, multiple finished parts can be made direct from the tooling.

- **Easy to seal**
  Requires up to just 4 coats.

TECHNICAL PROPERTIES		
PROPERTY	TYPICAL DATA	TEST METHOD
Color	Pink	
Density	740 kg/m³	
Shore Hardness	80 D	ASTM D2240
Uniaxial Compressive Strength	55 MPa	ASTM D694
Uniaxial Compressive Modulus	2655 MPa	
Tensile Stress	27 MPa	ASTM D638
Tensile Modulus	2600 MPa	
Flexural Strength	28 MPa	ASTM D790
Flexural Modulus	2100 MPa	
Shear Strength		ASTM D732
Heat Deflection Temperature (TMA)	135° C *	ASTM D648-18
Glass Transition Temperature (DSC)	135° C *	ASTM E1356
Coefficient of Linear Thermal Expansion (0 to 130°C)	40 x 10-6 / °C	ASTM E831-14
Thermal Conductivity (guarded hot plate) 90°C , (W/m/°K)	0.132	ASTM C518
Explosion Severity (machining chips)		
• Classification	St-1	ASTM E1226
• Kst Value	93 m*bar/s	
Multi Axial High- Speed Impact		
Energy @ Peak Load	3.42 J	ASTM D3763-18
Energy @ Break	3.92 J	
Total Energy	4.05J	

* +/- 5° C

Product Sizes

TC760X is available in a standard board size of 24" x 60" and in four different thicknesses:

	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 TC760X.
Please refer to the Trelleborg MSDS.

Cutting Guidelines

TC760X 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 TC760X material.

Machining Advisory

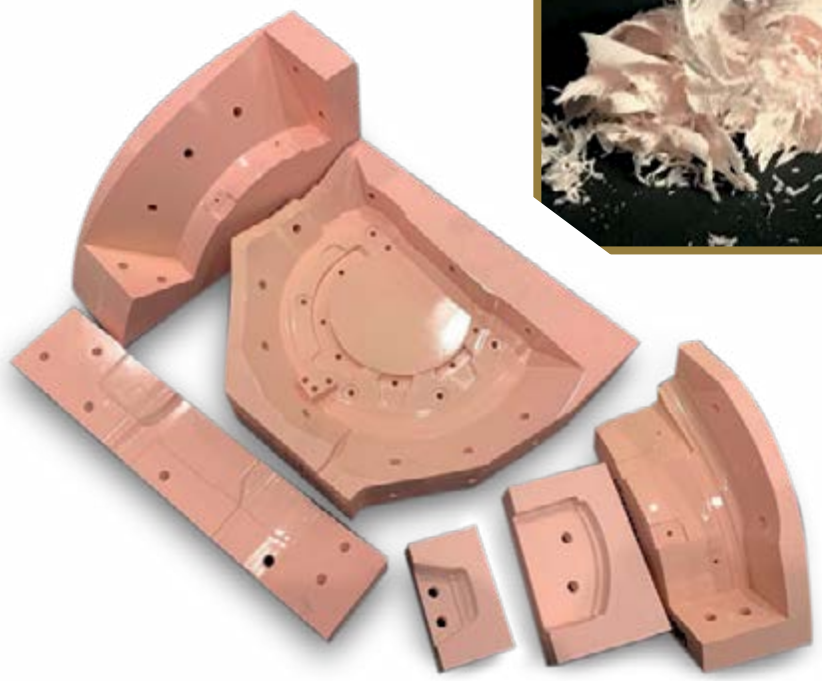
In order to avoid board distortion, it is recommended that stock removal should be taken equally from opposing faces. Where this is not possible, then the board should be supported by and bonded to additional layers.

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	500 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

Trelleborg's Applied Technologies division is an industry expert in delivering innovative and reliable solutions that maximize performance for our customers. Our vast range of specialized, customizable materials ensure peace of mind at every stage of your project. With reliable and efficient project management and manufacturing we endeavor to take performance to new levels by achieving your goals safely, on time and within scope.

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