

CT850 Tooling Board

COMPOTOOL CT850 is a high performance tooling board exhibiting very high temperature resistance and an extremely low coefficient of thermal expansion (CTE).

CT850 can be used for the production of master models or short run direct tooling for the manufacture of composite tooling and components. CT850 can be bonded to form complex shapes and then machined to a very high tolerance. It can be used in combination with COMPOTOOL CT300 to reduce overall the weight.

COMPOTOOL tooling boards can be used with resin systems requiring very high processing temperatures such as Cyanate Ester, Benzoxazine, Bismaliamide (BMI) and thermoplastic systems.

CT850 is inert and contains no VOC's.



Key Features:

- Very high temperature resistance.
- Very low thermal expansion.
- Can be bonded to build up complex shapes.
- Easily machined.
- Can be used in combination with CT300 to form large lightweight patterns.
- Can be used with both high and low temperature curing resin systems.
- Composite tooling can be produced in one operation from CT850 pattern without the need for separate cure and free standing post cure cycle.

Technical Information:

Density	850 kgm ⁻³ (55lb ft ⁻³)
Max Use Temperature	850°C (1500°F)
Coefficient of Thermal Expansion	6 x 10 ⁻⁶ K ⁻¹ (3.3x10 ⁻⁶ °F ⁻¹)
Compression Strength	14.0 MPa (2.0ksi)
Thermal Conductivity	0.27 Wm ⁻¹ K ⁻¹
Specific Heat Capacity	950 J.kg ⁻¹ K ⁻¹

Storage: Store in a dry location. Handle with care to avoid damage.
Note: it is recommended that CT850 is stabilised under workshop conditions before machining.

Cutting: COMPOTOOL boards should be cut using gulleted tungsten carbide tipped blades.

Typical Blade Specification

Diameter: 400mm (to cut 100mm board).
Blade height: ~10mm above top of board (gullet exposed)
Tooth count: 120
Angle: +5°
Kerf: 3.8

Bonding: CT850 should be bonded with COMPOTOOL CTA505 adhesive. (Please refer to data sheet for details).

Conditioning: The assembly should be allowed to air dry overnight. This can be accelerated by heating to a maximum of 80°C (180°F) for 2 to 4 hours. The assembly should then be conditioned in an oven at 100°C (210°F) (min) for 4 to 6 hours prior to machining.

Machining: CT850 can be machined using tungsten carbide tipped tools and can be easily sanded. (Please refer to processing document)

Sealing: Seal with COMPOTOOL Sealer System. (Please refer to data sheet for details).

Release: Once sealed, COMPOTOOL CTR404 Release agent should be applied. (Please refer to data sheet for details).

Supply:

Dimensions / mm (in)	Board Weight / kg (lb)
1200x485x50 (47x19x2)	26 (60)
1200x485x100 (47x19x4)	52 (120)

Health and Safety:

FOR INDUSTRIAL OR PROFESSIONAL USE ONLY.

DO NOT HANDLE UNTIL PRECAUTIONS ON THE SAFETY DATA SHEET HAS BEEN CAREFULLY READ AND UNDERSTOOD.

FOR ADDITIONAL ENVIROMENTAL, HEALTH AND SAFTY INFORMATION REFER TO SAFETY DATA SHEET.

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COMPOTOOL warrants that goods sold will be merchantable. If goods are defective, Buyer may return them at Buyer's cost to COMPOTOOL within 12 months of purchase for a full refund of the purchase price. Other than this limited warranty, there are no express or implied warranties. There is no warranty as to fitness for a particular use. COMPOTOOL recommends that The Buyer shall take all recommended safety precautions while working with the goods. COMPOTOOL and Buyer agree that other than return of the purchase price COMPOTOOL will not be liable for any damages, consequential damages or incidental damages. When handling this product prolonged skin contact may lead to skin irritation and airborne dust can be released. It is recommended that suitable gloves, respiratory and eye protection equipment are used when handling. When sanding and machining use appropriate dust extraction and work in a well-ventilated area.

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