

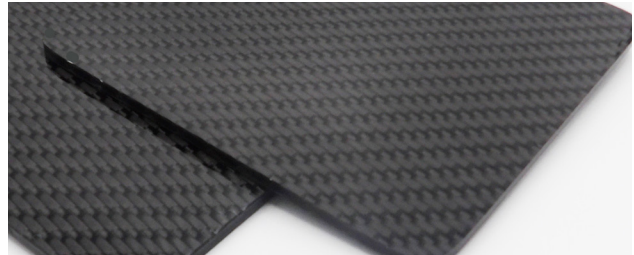
PRODUCT DATA SHEET

DESCRIPTION

Toray PMC CFRT® (TL-6000) is a reinforced thermoplastic composite that blends the benefits of a thermoplastic polymer matrix with woven carbon fibers for enhanced performance. Within the product range, 2 layer (MOD1, 2L), 3 layer (3L), or 4 layer (4L) products are available, all ultra-thin, lightweight, and resilient. This material can be drilled, ground, polished and adjusted after being formed with a heated gun. TL-6000 has a smooth high-gloss finish and transparent surface to show woven carbon fiber.

FEATURES

- › High strength and stiffness
- › High mechanical properties of “Thin & Light” (TL) laminates
- › Carbon fiber weave shown with a high-gloss and smooth finish
- › Choice of 2, 3, or 4 multilayers available
- › Core option available as MOD1 or with 4L



PRODUCT TYPE AND COMPOSITION

CFRT® (Continuous Fiber Reinforced Thermoplastic) composite with carbon fiber and modified Polymethylmethacrylate (acrylic) resin

TYPICAL APPLICATIONS

- › Orthosis knee and ankle bracing

SHELF LIFE

Stable indefinitely at 25°C (77°F)

Materials must be dried prior to heating and thermoforming. Please refer to the TPMC Processing Instructions.

MATERIAL PARAMETERS

Size	Cut to customer specifications from sheet of 91 x 122 cm (36 x 48 inches)
Standard Colors	Natural (Carbon)
Forming Temperature	195°C to 200°C (383°F–392°F)



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PHYSICAL ATTRIBUTES

	Thickness Range
MOD1	2.74 mm–3.20 mm (0.108–0.126")
2-layer	1.98 mm–2.41 mm (0.078–0.095")
3-layer	2.74 mm–3.18 mm (0.108–0.125")
4-layer	3.43 mm–3.71 mm (0.135–0.146")
4-layer with 0.05" core	5.08 mm–5.49 mm (0.200–0.216")

PROPERTIES: METHOD ASTM D790-10

Properties	MOD 1 *based upon 3.02 mm thickness	2 Layer *based upon 2.15 mm" thickness	3 Layer *based upon 2.92 mm thickness	4 Layer "based upon 3.42 mm thickness
Specific Gravity (g/cc)	1.37 g/cc	1.4 g/cc	1.42 g/cc	1.42 g/cc
Flexural Rigidity	6700 N-cm	1410 N-cm	3500 N-cm	9935 N-cm
Flexural Rigidity with 0.05" core	---	---	---	32250 N-cm
Flexural Modulus	29.0 GPa	16.5 GPa	15.5 GPa	28.4 GPa
Flexural Modulus with 0.05"	---	---	---	28.6 GPa
Flexural Strength	266 MPa	310 MPa	350 MPa	365 MPa
Flexural Strength with 0.05" core	---	---	---	245 MPa

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