

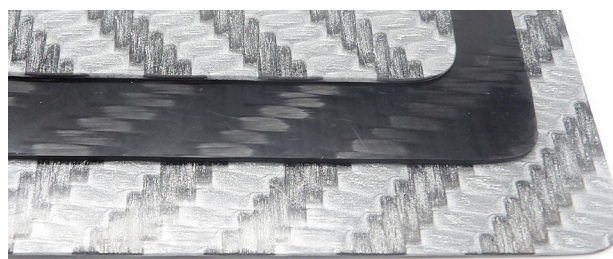
PRODUCT DATA SHEET

DESCRIPTION

Toray PMC CFRT® (TW-4000) is a reinforced thermoplastic composite laminate. It blends the benefits of a thermoplastic polymer matrix with woven carbon and glass fibers in a twill weave for enhanced shapes and performance. The TW-4000 laminate is available in a single-layer product; carbon in one direction and glass fibers at 90° orientation to the carbon. The TW-4000 laminate is thin, lightweight, and resilient for improved energy return.

FEATURES

- › Twill weave of carbon fibers and glass fibers
- › Light weight, thin, single layer



PRODUCT TYPE AND COMPOSITION

Carbon fiber content: 24%–26%
Glass fiber content: 24%–26%
Modified PMMA thermoplastic resin: 48%–52%
(Noted: Percentages are by volume and are nominal values)

TYPICAL APPLICATIONS

- › Footwear
- › Recreational equipment
- › Skates

MATERIAL PARAMETERS

Specific Gravity	1.5 ± 0.15 (calculated based upon material volume)
Thickness	0.85 mm (± 0.2 mm)
Size	Cut to customer specifications from sheet of 91 x 122 cm (36 x 48 inches)
Standard Colors	Silver, Charcoal, and Black
Forming Temperature	195° to 200°C (383°F–392°F)
Bonding Temperature	55°C to 60°C (131°F–140°F)

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.

MECHANICAL PROPERTIES

Properties	Method	Results
Flexural Rigidity	ASTM D790-10	> 110 N-cm*
Flexural Strength	ASTM D790-10	> 420 MPa*
Flexural Modulus	ASTM D790-10	> 20000 MPa*

* Results per testing performed in carbon direction on nominal thickness material.

Revised 04/2019

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Toray Performance Materials Corporation

1150 Calle Suerte
Camarillo, CA 93012 USA
t +1 805 482 1722

CFRT®

www.toraypmc.com
contact@toraypmc.com