

PRODUCT DATA SHEET

DESCRIPTION

Toray PMC CFRT® (XT-Orthotics) are reinforced thermoplastic composite laminates. They blend the benefits of a thermoplastic polymer matrix with uni-directional glass fibers for enhanced performance. The XT-style laminate is offered in 6 rigidity grades for ultimate design control.

FEATURES

- › Uni-directional glass
- › Lightest weight, thin, multiple layers
- › Easy to mold and finish
- › High performance, yet economical
- › Available in different prints and patterns



PRODUCT TYPE AND COMPOSITION

Glass Fiber: 45%–55%
Polypropylene: 35%–45%
Polyester: 5%
Acrylic: 5%

(Note: Percentages are by volume and are nominal values)

TYPICAL APPLICATIONS

- › Footwear
- › Medical / Podiatry

MATERIAL PROPERTIES

Specific Gravity	1.40 ± 0.15 (calculated based upon material volume)
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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.



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TYPICAL LAMINATE PROPERTIES: THICKNESS VS. RIGIDITY

Property	Ease-Flex*	Semi-Flex**	Semi-Rigid***	Medium-Rigid****
Thickness	1.5–1.75 (mm)	1.6–1.8 (mm)	1.85–2.0 (mm)	2.1–2.4 (mm)
Weight	~ 40 (200 cm ²) (g)	~ 45 (200 cm ²) (g)	~ 50 (200 cm ²) (g)	~ 60 (200 cm ²) (g)
Rigidity	85 N-cm *	265 N-cm *	600 N-cm *	724 N-cm *
Flexural Modulus	3.0 GPa *	9.0 GPa *	6.7 GPa *	7.3 GPa *
Forming Time Grid at 204°C/Min.	3.0 min	3.5 min	4.0 min	4.5 min

*Based upon 1.6 mm thickness

**Based upon 1.7 mm thickness

***Based upon 1.95 mm thickness

****Based upon 2.2 mm thickness

Property	Rigid*	Ultra-Rigid**
Thickness	2.4–2.65 mm	2.85–3.2 mm
Weight	~ 70 (200 cm ²) (g)	~ 80 (200 cm ²) (g)
Rigidity	920 N-cm *	1350 N-cm *
Flexural Modulus	5.3 GPa *	5.3 GPa *
Forming Time Grid at 204°C/Min.	4.5 min	5.0 min

*Based upon 2.6 mm thickness

**Based upon 3.0 mm thickness

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