

## 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

### 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)

TL-2100 must be kept dry, please refer to processing information.

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



Contact us for more information:

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### TYPICAL LAMINATE PROPERTIES: THICKNESS VS. RIGIDITY

Property	Ease-Flex*	Semi-Flex**	Semi-Rigid***	Medium-Rigid****
Thickness (mm)	1.5–1.75 (mm)	1.6–1.8 (mm)	1.85–2.0 (mm)	2.1–2.4 (mm)
Weight (200 cm <sup>2</sup> ) (g)	~ 40 (200 cm <sup>2</sup> ) (g)	~ 45 (200 cm <sup>2</sup> ) (g)	~ 50 (200 cm <sup>2</sup> ) (g)	~ 60 (200 cm <sup>2</sup> ) (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*
Form 204°C/Min.	3.0	3.5	4.0	4.5

\*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 (mm)	2.4–2.65 mm	2.85–3.2 mm
Weight (200 cm <sup>2</sup> ) (g)	~ 70 (200 cm <sup>2</sup> ) (g)	~ 80 (200 cm <sup>2</sup> ) (g)
Rigidity	920 C-nm*	1350 C-nm*
Flexural Modulus	5.3 GPa*	5.3 GPa*

\*Based upon 2.6 mm thickness

\*\*Based upon 3.0 mm thickness

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Toray(XT-Orthotics)\_DS\_v6\_2019-04-24 Page 2/2

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