

## PRODUCT HIGHLIGHT

### DESCRIPTION

Toray PMC CFRT® XT-Orthotics are lightweight, high strength laminates that are available in several rigidity types ranging from Ease Flex to Ultra Rigid.

### FEATURES

- Thin, durable material for custom orthotics for use in broad and demanding applications, (i.e. dress shoes, athletic applications)
- 6 XT grades for ultimate design control
- Easy to mold and finish, requiring no special handling
- Value/performance leader
- High performance - yet economical



### 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)
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*
Time Grid Minutes at 200°C	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
Rigidity	920 C-nm*	1350 C-nm*
Flexural Modulus	5.3 GPa*	5.3 GPa*
Time Grid Minutes at 200°C	4.5	5.0

\*Based upon 2.6 mm thickness

\*\*Based upon 3.0 mm thickness

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### PRODUCT TYPE AND COMPOSITION

Toray PMC CFRT® (Continuous Fiber Reinforced Thermoplastic)  
Glass Fiber Polypropylene Thermoplastic Biaxial Laminate

### TYPICAL APPLICATIONS

› Orthotics

### PERFORMANCE

- › Composite structure for thinness and high strength
- › Unique resin designed for high resistance to cracking, impact, and fatigue
- › Superior recoil and spring characteristics
- › Deep heel cups and directional rigidity for greater foot support and control
- › Can be reheated and remolded

### FABRICATION

- › Easy to mold - allows deep heel cups • can be reheated and remolded • indefinite shelf life, no special storage conditions • easy to machine and finish • post adjustment with heat gun
- › Equipment required: oven, vacuum former, mold cast, release liner (Teflon), gloves
- › 1. Set the panel on release liner and place in oven at 200°C (400°F) for 3-5 minutes (see time grid)
- › 2. Place the softened panel on mold.
- › 3. Promptly apply vacuum and close the rubber membrane.
- › 4. For the deep arches, massage out any wrinkles by hand.
- › 5. After about 1 minute, remove molded insert and trim.

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