

PRODUCT DATA SHEET



TENCATE PERFORMANCE COMPOSITES

TenCate TL-2100

PRODUCT TYPE

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

TYPICAL APPLICATIONS

- Orthotics
- Foot supports
- Preforms

SHELF LIFE

Stable indefinitely at 77°F (25°C)

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

Revised 5/2017

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PRODUCT DESCRIPTION

All grades of TenCate Cetex® TL-2100 consist of the same composition resin, carbon fiber and laminate concept of our proprietary sandwich construction. The carbon fiber (graphite) provides strength, stiffness, and durability.

TenCate TL-2100 Semi-Flex, Semi-Rigid, Rigid and Ultra differ only in terms of the volume of carbon fiber used and the thickness of the sheet material. TL-2100's custom-designed weave provides high strength carbon fiber in the longitudinal direction of an orthotic.

PRODUCT BENEFITS/FEATURES

- "Thin and Light" for proper fit within the shoe without raising the foot
- Custom-designed weave provides high strength carbon fiber in the longitudinal direction of an orthotic to enhance stability
- A full radius on one end for enhanced forming of heel cups for ease of distribution to podiatry laboratories
- Produced and sold in dried pre-cut rectangular plates in moisture resistant bags which are ready for fabrication into orthotics
- Five standard sizes cover the full range of orthotic requirements but is also available in full sheet format (1220mm x 910mm). All products have a .007" film on the outside to improve durability



Size	Dimensions		
1	3.0 x 7.0 inches	76.2 x 177.8 mm	Sizes 1 and 3 are not available in the Ultra Strength grade.
3	3.5 x 7.5 inches	88.9 x 190.5 mm	
4	4.0 x 8.0 inches	101.6 x 203.2 mm	Additional sheet sizes are available on a factory special order basis only. Contact your materials distributor for further information.
5	4.0 x 8.5 inches	101.6 x 215.9 mm	
6	5.0 x 9.0 inches	127 x 228.6 mm	

TYPICAL LAMINATE PROPERTIES: THICKNESS VS. RIGIDITY

Property	Semi-Flex	Semi-Rigid	Rigid	Ultra
Rigidity (lb-in ² /N-cm ²)	44/124	80/240	145/424	240/468
Thickness (in/cm)	0.070/.1778	0.090/.2286	0.110/.2794	0.115/.2921
Inner core (in/mm)	0.013/0.33	0.025/0.64	0.050/1.27	0.050/1.27
Carbon fiber tow size	3k x 6k	3k x 6k	3k x 6k	6k x 3k
Flex load (lbs/kg)	165/75	280/127	350/159	410/186
Modulus (GPa)	11.0	9.7	9.0	10.3
Strength (Mpa)	363	337	282	302
Polypro replacement	1/8" - 3/16"	3/16" - 1/4"	1/4" +	1/4" +
	3.2 - 4.8 mm	4.8 - 6.4 mm	6.4 mm	6.45 mm

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