

PRODUCT DATA SHEET



TENCATE ADVANCED COMPOSITES

TenCate Cetex® TC951 (TL2100)

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)

TL2100 must be kept dry, please contact TenCate for processing information.

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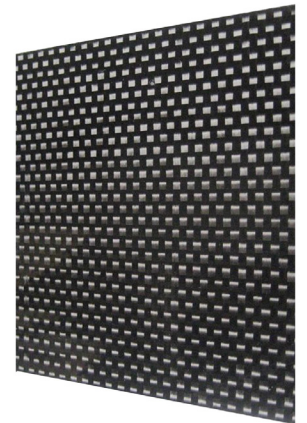
PRODUCT DESCRIPTION

All grades of TenCate Cetex® TC951 (TL2100) consist of the same acrylic resin, carbon fiber and laminate fabrication in TenCate's proprietary sandwich construction. The carbon fiber (graphite) provides strength, stiffness, and durability.

TenCate Cetex® TC951 (TL2100) 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. TC951's (TL2100) custom-designed weave provides high strength carbon fiber in the longitudinal and tranverse direction on the orthotic.

PRODUCT BENEFITS/FEATURES

- "Thin and Light" for proper fit within the shoe without raising the foot
- A full radius on one end of the blank for enhanced forming of heel cups of custom orthotics
- Custom-designed weave provides additional stability, support and bio-mechanical correction of the foot in the lateral to medial orthotic direction
- 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 0.007" film on the outside to improve durability



Size	Dimensions		Sizes 1 and 3 are not available in the Ultra Strength grade. Additional sheet sizes are available on a factory special order basis only.
1	3.0 x 7.0 inches	76.2 x 177.8 mm	
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	
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

Property	Condition	Method	Semi-Flex	Semi-Rigid	Rigid	Ultra
Rigidity (lb-in ²) / (N-cm ²)	RTD	ASTM D790-10	42/124	82/240	145/424	160/168
Thickness (in/cm)	RTD	ASTM D790-10	0.07/.178	0.09/.229	0.11/.279	0.115/.292
Inner core (in/mm)	RTD	ASTM D790-10	0.013/0.33	0.025/0.64	0.050/1.27	0.050/1.27
Carbon fiber tow size	RTD	ASTM D790-10	3k x 6k	3k x 6k	3k x 6k	6k x 3k
Flex load (lbs/kg)	RTD	ASTM D790-10	165/75	280/127	350/159	410/186
Modulus (Msi/GPa)	RTD	ASTM D790-10	1.6/11.0	1.4/9.7	1.3/9.0	1.5/10.3
Strength (ksi/MPa)	RTD	ASTM D790-10	53/363	49/337	41/282	44/302
Polypro replacement	RTD	ASTM D790-10	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

TENCATE PERFORMANCE COMPOSITES

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