

TECATEC™ CF60 Plates and near net shapes with outstanding strength

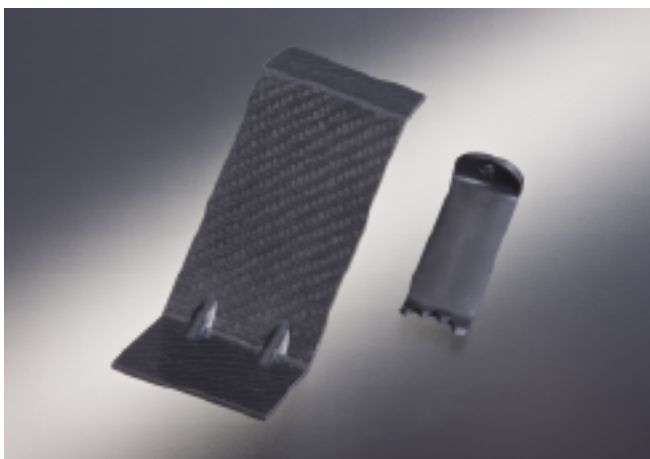
Under the heading stiff, strong, and radiolucent, we are introducing a highly loaded carbon fibre composite available in plate, water jet blanks, and compression molded near net shapes.

TECATEC™ CF60 plate is a composite of 60% woven carbon fiber laminated with a poly aryl ether ketone resin (PAEK). It is produced in a proprietary process yielding good fibre and resin integration. PAEK resins are excellent for repeated steam sterilization cycles and carbon provides metal like dimensional stability and stiffness. Carbon fibre composites are radiolucent and are ideal for external fixation devices and surgical instruments such as targeting fixtures and retractor blades.

ENSINGER offers water jet cutting and fabrication services to produce part blanks. This maximizes part yield from a standard sheet and eliminates milling time in roughing out a part blank. The blanks can also be faced to hold a flatness of .004".

TECATEC™ CF60 near net shapes (NNS)

For part geometries with more depth and/or have high material yield losses machining from plate, ENSINGER has partnered with American Matrix Corporation to offer molded near net shapes. American Matrix Corporation has the premier design and manufacturing expertise to mold near net shape composites of carbon and PEEK.



Properties

- | Outstanding strength
- | Excellent heat distortion
- | Good dimensional stability
- | Low moisture absorption
- | Corrosion resistance
- | Excellent chemical resistance
- | Excellent steam sterilization in autoclave performance

Availability

- | Standard plate sizes are 42" wide x 48" long with cut sheet portions available on inquiry
- | Thickness ranges from 1/4" to 1-1/2" (6,35 mm - 38,1 mm) made to order
- | ENSINGER Inc. offers water jet services
- | Near net shape molding of semi-finished parts

Preferred fields

Medical technology (surgery, orthopaedics)

Applications

Targeting guides, retractor blades, fixturing assemblies, structural components

Composite retractor blades made of TECATEC™ CF60 and TECAPEEK™ XP98 offer stiffness while providing radiolucency

TECATEC™ CF60 plates

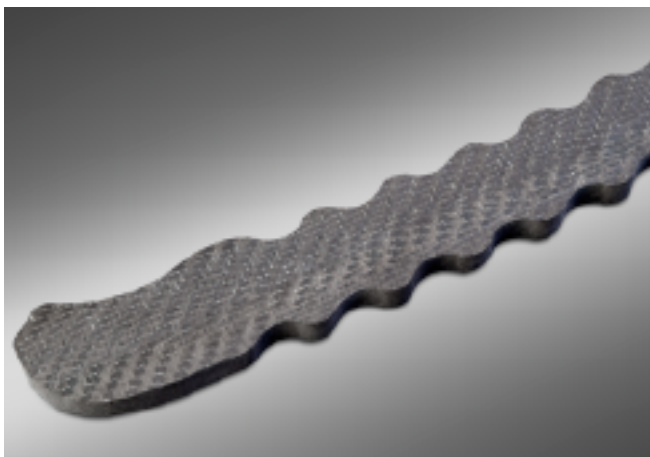
Technical characteristics

Property	Test method	Orientation	Unit	Value
Tensile Strength	EN 2597B	Warp	MPa Psi	821 119,045
		Fill	MPa Psi	729 105,705
Tensile Modulus	EN 2597B	Warp	GPa Psi	54.0 7,830,000
		Fill	GPa Psi	55.8 8,091,000
Flex Strength	EN 2562A	Warp	MPa Psi	804 116,580
		Fill	MPa Psi	894 129,630
Flex Modulus	EN 2562A	Warp	GPa Psi	40.8 5,916,000
		Fill	GPa Psi	51.4 7,453,000
Compression Strength	D 6641-01	Warp	MPa Psi	574 83,230
		Fill	MPa Psi	522 75,690
Compression Modulus	D 6641-01	Warp	GPa Psi	52.7 7,641,000
		Fill	GPa Psi	53.2 7,714,000
Short Beam Strength	D 2344-84	Warp	MPa Psi	67.1 9,729

Conditions: at room temperature.

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Please find information concerning the exclusion of liability and Terms and Conditions of Delivery in our Semi-finished products catalogue or at www.ensinger-online.com.



Water jet cutting services provide general edge contours for TECATEC™ CF60 parts, providing better yields from sheet and eliminating rough machining time on the mill.



Near net shape molding provides more three dimensional detail in part blanks and increased part depth capability.