

Cytec APC-2 PEEK Thermoplastic

Polyetheretherketone

Cytec Industries Inc.

Message:

Cytec Engineered Materials APC-2 composites have a thermoplastic matrix of poly(ether-ether-ketone) commonly referred to as PEEK. The polymer is semi-crystalline with a glass transition temperature of 289°F (143°C).* Composites can be used in lightly loaded applications at temperatures up to 500°F (260°C) due to the semi-crystalline nature of the polymer. The composites possess excellent environmental resistance, toughness and fir resistant properties.

APC-2 prepreg can be stored at ambient conditions and has an indefinite shelf life. APC02 composites retain good mechanical properties at cryogenic temperatures. The excellent composite properties result from the PEEK matrix, the full wetting and tailored fiber matrix interface achieved in the impregnation process.

Laminates and parts can be fabricated from APC-2 using a wide range of processes from autoclave consolidation to rapid stamping techniques. The prepreg may also be filament wound and tape-placed using in-situ consolidation. This wide range of processing techniques may be used because of the thermoplastic nature of the polymer and the full wetting of the fibers in the prepreg.

Suggested Applications:

Typical applications for Cytec Engineered Materials APC-2 include aircraft structure, space components and other structural engineering components

General Information		
Filler / Reinforcement	Carbon Fiber	
	Glass Fiber	
Features	Fatigue Resistant	
	Good Creep Resistance	
	Good Toughness	
	Good Wear Resistance	
	High Heat Resistance	
	Semi Crystalline	
Uses	Aerospace Applications	
	Laminates	
	Structural Parts	
Physical	Nominal Value	Unit
Specific Gravity	1.32	g/cm ³
Mechanical	Nominal Value	Unit
Tensile Modulus (24°C)	3590	MPa
Tensile Strength (24°C)	100	MPa
Tensile Elongation (Break)	70	%
Flexural Modulus	4070	MPa
Flexural Strength	170	MPa
Thermal	Nominal Value	Unit
Glass Transition Temperature	143	°C

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

