

# Cytec PEKK Thermoplastic

Polyetherketoneketone

Cytec Industries Inc.

## Message:

Cytec Engineered Materials PEKK composites consist of a matrix of poly(ether-ketone-ketone) polymer with aligned, continuous unidirectional fiber reinforcement. Typical fiber contents are 50 - 60% by volume. The tapes and ribbons are fully impregnated with a tailored fiber-matrix interface for optimal performance. Cytec also supplies custom laminates made from the tapes. The polymer is semi-crystalline with a Tg of 318°F (159°C). The composites have good structural performance at temperatures in excess of 250°F (121°C). PEKK composites can be used in lightly loaded applications at temperatures up to 400°F (204°C) due to the semi-crystalline nature of the polymer. PEKK composites possess outstanding flame, smoke and toxicity performance. They also have high toughness and damage tolerance. Laminates and parts can be fabricated from PEKK using a wide range of techniques including autoclave and press molding. Prepregs are offered in various grades of PEKK polymer optimized for select manufacturing methods. Information is available upon request for additional grades of PEKK to use in injection molding, sheet, film or fabric composites.

Suggested Applications:

Typical applications for Cytec Engineered Materials PEKK prepregs include aircraft structure, space components and other transportation and structural engineering components.

General Information			
Features	Autoclavable		
	Flame Retardant		
	Good Toughness		
	High Heat Resistance		
	Low Moisture Absorption		
	Low Smoke Emission		
	Recyclable Material		
Uses	Aerospace Applications		
	Structural Parts		
Forms	Fiber		
Processing Method	Press Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
-- 1	1.28	g/cm <sup>3</sup>	
-- 2	1.31	g/cm <sup>3</sup>	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus <sup>3</sup>	4480	MPa	ASTM D1708
Tensile Strength <sup>4</sup>	102	MPa	ASTM D1708
Tensile Elongation <sup>5</sup> (Break)	4.0	%	ASTM D1708
Flammability	Nominal Value		Test Method
Flame Rating	V-0		UL 94
NOTE			
1.	Neat Resin, 0% crystalline		
2.	Neat Resin, 30% crystalline		

3.	Neat Resin
4.	Neat Resin
5.	Neat Resin

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### 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

