



# PEEK

## Material Datasheet

Physical Properties	Units	Methods
Specific Gravity	0.047 Ib/in <sup>3</sup>	ASTM D792
Water Absorption	0.1%	Immersion, 24hr, ASTM S570(2)
Water Absorption at Saturation	0.5%	Immersion, ASTM S570(2)

Mechanical Properties		
Hardness Rockwell M	100	ASTM D785
Hardness Rockwell R	125	ASTM D785
Hardness Shore D	85	ASTM D2240
Tensile Strength	15,000 psi	ASTM D638
Elongation at Break	20%	ASTM D638
Tensile Modulus	600,000 psi	ASTM D638
Flexural Modulus	600,000 psi	ASTM D790
Flexural Yield Strength	25,000 psi	ASTM D790
Compressive Strength	20,000 psi	10% Def. ASTM D695
Compressive Modulus	500,000 psi	ASTM D695
Izod Impact (notched)	1.2ft-lbs/in	ASTM D256 Type A

Thermal Properties		
Melt Point	644 <sup>o</sup> F	ASTM D3418
Heat Deflection Temp (264psi)	320 <sup>o</sup> F	ASTM D648
Coefficient of Linear Thermal Expansion	2.6 x 10 <sup>-5</sup> F <sup>-1</sup>	ASTM E831



\*The mechanical properties of extruded shapes may differ from the values published by resin producers. Published resin data is always generated off injection molded test specimens run under near perfect conditions. Extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining, enhanced crystallinity resulting from processing and fiber alignment inherent in all reinforced plastic shapes, regardless of process.



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## PEEK



PEEK is part of a family of polyarylether ketones (PAEK) but the PEEK acronym is most recognized. Related chemistries based on PEK and PEKK offer unique thermal benefits to the traditional PAEK.

PEEK is recognized as having the best balance of chemical resistance, wear resistance and heat resistance among all thermoplastics. It is melt processible allowing for processing into shapes by extrusion and injection molding.

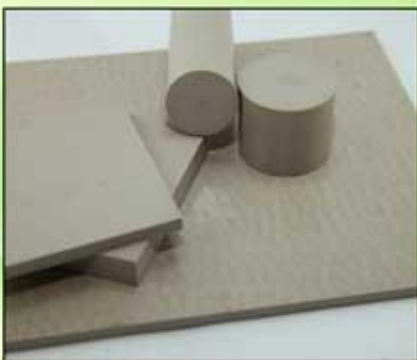
PEEK is known for its exceptional chemical inertness including to saturated steam. Only a few halogenated acids like HF will affect PEEK. PEEK polymers have a softening temperature of 175-200°C and a melting temperature of 350°C.



PEEK material complies with FDA regulation 21 CAR 177.2415 for repeated food contact. PEEK also has V-O flammability ratings and exhibit very low smoke and toxic gas emission when exposed to flame.

#### Key Features:

- Excellent chemical resistance
- Very low moisture absorption
- Inherently good wear and abrasion resistance
- Unaffected by continuous exposure to hot water or steam



#### PEEK Filler Grade :

PEEK is available in Carbon & Glass Filled, Requirement for some extraordinary wear and heat resistant bearing materials for chemically tough service conditions. PEEK Filled Grades are not FDA Approved

JAS-ANZ



ISO 9001:2008  
CERTIFIED



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