



AN EOS COMPANY



# HT-23

## PEKK

The HT-23 is based on a PEKK resin with 23% Carbon Fiber compounded in and ground to a fine powder.

### HIGHLIGHTS

- Isotropic properties
- Melt compounded Carbon Fiber filled PEKK
- High melt point
- Chemical resistant
- Inherently flame retardant

### APPLICATIONS

- Aerospace
- Mobility industry
- Complex geometries requiring accuracy and feature resolution
- Well suited to applications which require superior thermal properties, with maximum performance and consistent properties in XY&Z dimensions



### HEADQUARTERS

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## PEKK

The HT-23 is based on a PEKK resin with 23% Carbon Fiber compounded in and ground to a fine powder.

TYPICAL PHYSICAL PROPERTIES			
PROPERTY	TEST METHOD	IMPERIAL	METRIC
Color/Appearance	Visual	Dark Grey	Dark Grey
Bulk Density	ASTM D1895	0.018 lb./in <sup>3</sup>	0.5 g/cm <sup>3</sup>
Average Particle Size (D50)	Laser Diffraction	0.003 inches	80 microns
Particle Size Range (D10-D90)	Laser Diffraction	0.002 - 0.005 inches	45 - 115 microns
Sintered Part Density	ASTM D792	0.050 lb./in <sup>3</sup>	1.39 g/cm <sup>3</sup>
Elongation at Break	ASTM D638	1.16% XY / 1.06% ZX	1.16% XY / 1.06% ZX
Flexural Strength	ASTM D790	14,649 psi / 11,748 psi	101 MPa / 81 MPa
Flexural Modulus	ASTM D790	865.88 kpsi / 744.04 kpsi	5.97 GPa / 5.13 GPa
Tensile Modulus X	ASTM D638	942.75 kpsi	6.50 GPa
Tensile Modulus Y	ASTM D638	928.24 kpsi	6.40 GPa
Tensile Modulus Z	ASTM D638	841.22 kpsi	5.80 GPa
Ultimate Tensile Strength	ASTM D638	10,298 psi / 8,557 psi	71 MPa / 59 MPa
Tensile Strength X	ASTM D638	11,603 psi	80 MPa
Tensile Strength Y	ASTM D638	11,167 psi	77 MPa
Tensile Strength Z	ASTM D638	8,847 psi	61 MPa
Strain at Break X	ASTM D638	1.3%	1.3%
Strain at Break Y	ASTM D638	1.3%	1.3%
Strain at Break Z	ASTM D638	1.1%	1.1%
IZOD Impact Strength (Unnotched)	ASTM D256	1.50 ft.lb/in / 1.89 ft.lb/in	80 J/m / 101 J/m
IZOD Impact Strength (Notched)	ASTM D256	0.37 ft.lb/in / 0.34 ft.lb/in	20 J/m / 18 J/m
Volume Resistivity (23C, 50%RH, 500V) (X / Y / Z)	ASTM D257	–	1.28E+14 / 3.83E+14 / 2.08E+14 Ω-cm
Surface Resistivity (23C, 50%RH, 500V) (X / Y / Z)	ASTM D257	–	1.46E+14 / 5.38E+11 / 1.68E+15 Ω/square
Melting Point	ASTM D3418	575°F	302°C
Melt Flow Rate (5min, 2.16kg, 350°C)	ASTM D1238	0.71 oz / 10 min	20 grams / 10 min
Heat Deflection Temp @ 0.45 MPa	ASTM D648	527°F / 525.2°F	275°C / 274°C
Heat Deflection Temp @ 1.82 MPa	ASTM D648	413.6°F / 395°F	212°C / 202°C

The material properties provided herein are for reference purposes only. Actual values may vary significantly as they are dramatically affected by part geometry and process parameters. Material specifications are subject to change without notice.