PEEK

PEEK offers high temperature and chemical resistance for CNC machined parts.

Mechanical properties

Ultimate tensile strength	70.3 - 103 MPa
Yield strength	87 - 95 MPa
Young's modulus (modulus of elasticity)	3.76 - 3.95 GPa
Elongation at break	30 - 150 %
Hardness	26.1 - 28.5 HV

Physical properties

UV resistance	Good

Thermal properties

Maximum service temperature	239 - 260 °C
Thermal expansion coefficent	50 - 60 10^-6/ºC
Thermal conductivity	0.24 - 0.26 W/(m·°C)

Electrical properties

ESD Safety	No

Common applications

Bushings & bearings	
Seals & back-up rings	
Pump & valve components	
Medical instrumentation	
Food processing machinery components	

PEEK CNC Machining Applications & Parts

At Slinar, we've mastered the art of machining PEEK to overcome its challenges—like its tendency to melt and warp—delivering dimensionally stable parts that perform in the most demanding environments.

Precision Parts We Machine from PEEK:

- **Aerospace Compliant Components:** Bushings, seal carriers, and insulation parts for engine compartments that meet strict flame, smoke, and toxicity (FST) standards.
- **Medical Sterilizable Instruments:** Surgical tool handles, trial implants, and arthroscopy devices that withstand repeated autoclaving without degradation.
- **Semiconductor Manufacturing Parts:** Wafer carriers, clamp rings, and vacuum wand tips that resist plasma erosion and maintain high purity.
- **Chemical Processing Equipment:** Pump seals, valve seats, and bearing cages that handle aggressive acids and solvents.

Our PEEK Machining Expertise:

We employ specialized sharp-cut tooling and precise cooling techniques to prevent melting and delamination, achieving tight tolerances and superior surface finishes for critical applications.

Get an Instant Quote for your custom PEEK parts today.