PAI

PAI provides high strength and wear resistance at elevated temperatures.

Mechanical properties

Ultimate tensile strength	64.7 - 79.1 MPa
Yield strength	51.2 - 63.8 MPa
Young's modulus (modulus of elasticity)	1.58 - 1.97 GPa
Elongation at break	200 - 300 %
Hardness	16.4 - 18.1 HV

Physical properties

UV resistance	Fair

Thermal properties

Maximum service temperature	90 - 130 °C
Thermal expansion coefficent	88.2 - 91.8 × 10^-6/°C
Thermal conductivity	0.294 - 0.306 W/(m·°C)

Electrical properties

ESD Safety	No

Common applications

Transportation	
Electronics & Electrical Components	

PAI CNC Machining Applications & Parts

PAI stands at the pinnacle of performance thermoplastics, offering the highest strength, stiffness, and creep resistance at elevated temperatures, which we precision machine for the most critical applications.

Typical Parts We Machine from PAI:

- **Aerospace & Defense:** Structural Brackets, Threaded Inserts, Missile Components
- **High-Performance Industrial:** Seals, Bushings, Bearings, Valve Plates for compressors
- **Precision Electrical:** Insulators in high-power generators, Connectors

Our Machining Advantage:

Machining PAI requires expert knowledge to manage its brittleness; we employ micro-grain carbide tooling and precise parameters to achieve complex features and flawless surface finishes.

Get an Instant Quote your custom PAI parts today.