

CNC MILLING

POLYETHERETHERKETONE PEEK & RPEEK 25%



PRODUCT DESCRIPTION:

This grade of Polyetheretherketone PEEK is an unfilled, general purpose grade that offers the highest elongation and toughness of all materials in the PEEK family. It comes in a natural light brown colour and in two versions:

- PEEK FDA (only raw material)
- rPEEK 25% recycled content

APPLICATIONS

The go to do-all plastic for high end aerospace, racing and medical applications. Sliding components, guide rollers, chain guides in ovens, tank linings, thermoformed parts, various components for food, drinking water, medical, pharmaceutical and biotechnological use, packaging plants, semi-conductor technology and microelectronics, nuclear and x-ray technology, gas and oil exploration and conveying, aerospace applications, gears and engine building.



KEY PRODUCT BENEFITS

- Available in two versions: virgin and with 25% recycled content
- High resistance to high temperatures, radiation, chemicals, hydrolysis and moisture
- Minimal thermal expansion
- Low outgassing rates in a vacuum

Mechanical Properties	Test Method	Value PEEK	Value rPEEK 25%
Colour	-	Natural (light brown)	Natural (light brown)
Density	ISO 1183-1	1,32 g/cm ³	1,31 g/cm ³
Modulus of elasticity	ISO 527-1/-2	4000 MPa	4300 MPa
Tensile strength at yield	ISO 527-1/-2	5%	5%
Tensile strength at break	ISO 527-1/-2	20%	17%
Water absorption after 24h immersion in water of 23 °C (73°F)	ISO 62	0.06%	0.06%

Thermal Properties	Test Method	Value	Value
Melting temperature	ISO 11357-1/-3	340°C	340°C
Service temperature long term		250°C	250°C
Thermal conductivity at 23°C (73°F)		0.25 W/ (K*m)	0.25 W/ (K*m)
Flammability (UL94)	UL 94	v-0	v-0

Electrical Properties	Test Method	Value	Value
Surface resistivity	ANSI/ESD STM 11.11	10E12 Ohm/sq	10E12 Ohm/sq

Please note that this table, mainly to be used for comparison purposes, is a valuable help in the choice of a material. The data listed here fall within the normal range of product properties of dry material and come from our suppliers data sheets. However, they are not guaranteed and they should not be used to establish material specification limits nor used alone as the basis of design.

TOLERANCES

Typically, Protolabs can maintain a machining tolerance of +/- 0.1 mm.