

Material Data Sheet

PEEK - Polyetheretherketone

General

- FDA food contact compliant
- Excellent wear & friction behavior
- Low permeability
- Low abrasion at the counterpart surface of soft metal
- Good dimensional stability at high temperature
- Good electrical strength
- High mechanical strength, stiffness and creep resistance
- Fatigue resistant
- Flame retardant
- Excellent chemical resistance
- High energy radiation resistant
- Radiation and heat sterilizable

Physical properties

Density(Specific Gravity)	ASTM D-792	g/cm ³ (gm / cc)	1.30 - 1.32
Water Absorption(Max.) 24 hours	ASTM D-570	%	0.1
Flammability		-	V-0

Mechanical properties

Tensile Strength	ASTM D-638	mpa	≥95
Elongation of Break	ASTM D-638	%	≥10
Tensile modulus	ASTM D-638	Gpa	3.3 - 4
Hardness Shore	ASTM D-2240	Shore D	≥80
Hardness Rockwell M scale	ASTM D785	Rockwell	≥90

Thermal properties

Peak Melting Temperature	ASTM D-3418	°C	340-343
Specific heat capacity, at 23°C	DSC	kJ kg ⁻¹ °C ⁻¹	2.2
Thermal conductivity, at 23°C	ASTM E-1530	W/mK	0.25
Deflection Temperature, 1.8MPa unannealed	ASTM D-648	°C	157
Relative Thermal Index-Electrical	UL746B	°C	260
Relative Thermal Index-mechanical w/o impact	UL746B	°C	240
Relative Thermal Index-mechanical w/ impact	UL746B	°C	180

Electrical properties

Dielectric strength, 2mm thick	ASTM D-149	Kv/mm	22
Surface Resistivity	ASTM D-258	ohm	>10 ¹⁷
Volume Resistivity	ASTM D-257	ohm cm	>10 ¹⁷

- NOTE:
- *The data stated above are typical values intended for reference and comparison purposes only.
 - *The data should not be used as a basis for design specifications or quality control.
 - *The information is provided as a guide to the best of our knowledge and given without obligation or liability.
 - *Testing under individual application circumstances is recommended.