

PEEK

Physical Properties	Metric	English
Specific Gravity	1.31 g/cc	1.31 g/cc
Water Absorption	0.10 %	0.10 %
Water Absorption at Saturation	0.50 %	0.50 %
Mechanical Properties	Metric	English
Hardness, Rockwell M	100	100
Hardness, Rockwell R	126	126
Hardness, Shore D	85	85
Tensile Strength	110 MPa	16000 psi
Tensile Strength at 150°C (300°F)	20.7 MPa	3000 psi
Tensile Strength at 65°C (150°F)	82.7 MPa	12000 psi
Elongation at Break	40 %	40 %
Tensile Modulus	4.34 GPa	630 ksi
Flexural Strength	172 MPa	25000 psi
Flexural Modulus	4.14 GPa	600 ksi
Compressive Strength	138 MPa	20000 psi
Compressive Modulus	3.45 GPa	500 ksi
Shear Strength	55.2 MPa	8000 psi
Izod Impact, Notched	0.320 J/cm	0.600 ft-lb/in
Coefficient of Friction, Dynamic	0.32	0.32
K (wear) Factor	755 x 10 ⁻⁸ mm ³ /N-M	375 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr
Limiting Pressure Velocity	0.298 MPa-m/sec	8500 psi-ft/min
Electrical Properties	Metric	English
Surface Resistivity per Square	>= 1.00e+13 ohm	>= 1.00e+13 ohm
Dielectric Constant	3.3	3.3
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz
Dielectric Strength	18.9 kV/mm	480 kV/in
Dissipation Factor	0.0030	0.0030
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz

Thermal Properties	Metric	English
CTE, linear	46.8 $\mu\text{m}/\text{m}\cdot\text{°C}$ @Temperature -40.0 - 149 °C	26.0 $\mu\text{in}/\text{in}\cdot\text{°F}$ @Temperature -40.0 - 300 °F
Thermal Conductivity	0.252 W/m-K	1.75 BTU-in/hr-ft ² -°F
Melting Point	340 °C	644 °F
Maximum Service Temperature, Air	249 °C	480 °F
Deflection Temperature at 1.8 MPa (264 psi)	160 °C	320 °F
Flammability, UL94	V-0	V-0
Compliance Properties	Metric	English
3A-Dairy	Yes	Yes
Canada AG	No	No
FDA	Yes	Yes
NSF	No	No
USDA	Yes	Yes
USP Class VI	No	No
Chemical Resistance Properties	Metric	English
Acids, Strong (pH 1-3)	Limited	Limited
Acids, Weak	Acceptable	Acceptable
Alcohols	Acceptable	Acceptable
Alkalies, Strong (pH 11-14)	Acceptable	Acceptable
Alkalies, Weak	Acceptable	Acceptable
Chlorinated Solvents	Acceptable	Acceptable
Conductive / Static Dissipative	No	No
Continuous Sunlight	Limited	Limited
Hot Water / Steam	Acceptable	Acceptable
Hydrocarbons - Aliphatic	Acceptable	Acceptable
Hydrocarbons - Aromatic	Acceptable	Acceptable
Inorganic Salt Solutions	Acceptable	Acceptable
Ketones, Esters	Acceptable	Acceptable
Miscellaneous Properties	Metric	English
Data Sheet Region	Americas	Americas
Targeted Usage	Load + Bearing	Load + Bearing

Descriptive Properties

Color

Natural

Machinability

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