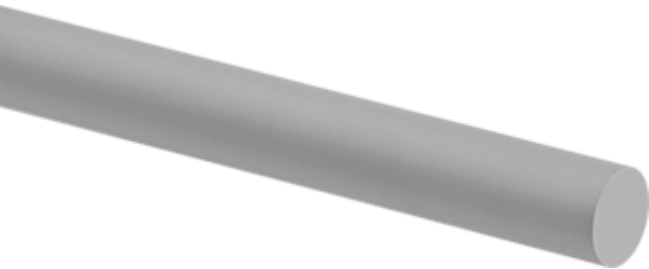


Wear- and Chemical-Resistant PEEK Rod

Beige, 2" Diameter

In stock
\$236.46 per ft.
8503K666



Material	PEEK Plastic
Shape	Rod and Disc
Texture	Smooth
Diameter	2"
Diameter Tolerance	0.000" to 0.015"
Tolerance Rating	Oversized
Hardness	Rockwell R126
Hardness Rating	Hard
For Use Outdoors	No
Temperature Range	-20° to 480° F
Impact Strength	0.6-0.95 ft.-lbs./in.
Impact Strength Rating	Poor
Tensile Strength	14,000-16,000 psi
Tensile Strength Rating	Excellent
Color	Beige
Clarity	Opaque
For Use With	Acetic Acid, Acetone, Beverage, Bleach, Coolant, Diesel Fuel, Food, Fuel Oil, Gasoline, Heating Oil, Hydraulic Fluid, Hydrochloric Acid, Hydrogen Peroxide, Isopropyl Alcohol, Kerosene, Methanol, Methyl Ethyl Ketone (MEK), Mineral Oil, Phosphoric Acid, Sodium Hydroxide, Water

Chemical Resistance	
Excellent	Acetic Acid, Acetone, Bleach, Coolant, Diesel Fuel, Fuel Oil, Gasoline, Heating Oil, Hydraulic Fluid, Hydrochloric Acid, Hydrogen Peroxide, Isopropyl Alcohol, Kerosene, Methanol, Methyl Ethyl Ketone (MEK),

Not Recommended	Mineral Oil, Phosphoric Acid, Sodium Hydroxide, Water Chlorine, Nitric Acid, Sulfuric Acid
Not Rated	Lacquer Solvents, Synthetic Oil, Vegetable Oil
Fabrication	Extruded
Density	0.047 lbs./cu. in.
Flexural Modulus	530,000-600,000 psi
Flexibility	Semi-Rigid
Coefficient of Friction	0.2-0.4
Friction Rating	Slippery
Dielectric Strength	480 V/mil
Electrical Insulation Rating	Good
Water Absorption	0.1-0.45%
Water Absorption Rating	Poor
Coefficient of Thermal Expansion	$2.5 \text{ to } 2.6 \times 10^{-5} \text{ in./in./}^{\circ}\text{F}$
Thermal Stability	Excellent
Environment	Food Industry, Sanitary
Specifications Met	ASTM D6262, FDA Compliant 21 CFR 177.2415, UL 94 V-0
Performance Properties	Chemical Resistant, Electrical Insulator, Food Contact, High Strength, High Temperature, Low Thermal Expansion, Slippery, Wear Resistant
Comparable To	Ketron, TecaPEEK
Warning Message	Physical and mechanical properties are not guaranteed. They are intended only as a basis for comparison and not for design purposes.
Length	1 ft., 2 ft., 3 ft., 4 ft.
Additional Specifications	SDS
RoHS	RoHS 3 (2015/863/EU) Compliant
REACH	REACH (EC 1907/2006) (01/19/2021, 211 SVHC) Compliant

DFARS	Specialty Metals COTS-Exempt
Country of Origin	United States
USMCA Qualifying	No
Schedule B	391690.6000
ECCN	1C998

Even when exposed to chemicals, these rods and discs remain wear resistant. Made of PEEK, they stand up to repetitive processes as well as abrasion. They're sometimes used as a lightweight substitute for metal parts in high-stress applications.

Mitsubishi Chemical Advanced Materials Ketron® 1000 PEEK, Extruded Unfilled Polyetherether Ketone (ASTM Product Data Sheet)
Categories: Polymer; Thermoplastic; Polyketone; Polyetheretherketone (PEEK); Polyetheretherketone, PEEK, Unreinforced

Material Notes: Quadrant Engineering Plastic Products is now Mitsubishi Chemical Advanced Materials.

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Water Absorption	0.10 %	0.10 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	0.50 %	0.50 %	Immersion; ASTM D570(2)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	100	100	ASTM D785
Hardness, Rockwell R	126	126	ASTM D785
Hardness, Shore D	85	85	ASTM D2240
Tensile Strength	110 MPa	16000 psi	ASTM D638
Tensile Strength at 150°C (300°F)	20.7 MPa	3000 psi	ASTM D638
Tensile Strength at 65°C (150°F)	82.7 MPa	12000 psi	ASTM D638
Elongation at Break	40 %	40 %	ASTM D638
Tensile Modulus	4.34 GPa	630 ksi	ASTM D638
Flexural Strength	172 MPa	25000 psi	ASTM D790
Flexural Modulus	4.14 GPa	600 ksi	ASTM D790
Compressive Strength	138 MPa	20000 psi	10% Def.; ASTM D695
Compressive Modulus	3.45 GPa	500 ksi	ASTM D695
Shear Strength	55.2 MPa	8000 psi	ASTM D732
Izod Impact, Notched	0.320 J/cm	0.600 ft-lb/in	ASTM D256 Type A
Coefficient of Friction, Dynamic	0.32	0.32	Dry vs. Steel; QTM55007
K (wear) Factor	755 x 10 ⁻⁸ mm ³ /N-M	375 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	QTM 55010
Limiting Pressure Velocity	0.298 MPa-m/sec	8500 psi-ft/min	4:1 safety factor; QTM 55007

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	>= 1.00e+13 ohm	>= 1.00e+13 ohm	EOS/ESD S11.11
Dielectric Constant	3.3 @Frequency 1e+6 Hz	3.3 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	18.9 kV/mm	480 kV/in	Short Term; ASTM D149
Dissipation Factor	0.0030 @Frequency 1e+6 Hz	0.0030 @Frequency 1e+6 Hz	ASTM D150

Thermal Properties	Metric	English	Comments
CTE, linear	46.8 µm/m-°C @Temperature -40.0 - 149 °C	26.0 µin/in-°F @Temperature -40.0 - 300 °F	ASTM E831
Thermal Conductivity	0.252 W/m-K	1.75 BTU-in/hr-ft²-°F	ASTM F433
Melting Point	340 °C	644 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	249 °C	480 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	160 °C	320 °F	ASTM D648
Flammability, UL94	V-0 @Thickness 3.17 mm	V-0 @Thickness 0.125 in	Estimated Rating

Compliance Properties	Metric	English	Comments
3A-Dairy	Yes	Yes	Natural Only
Canada AG	No	No	
FDA	Yes	Yes	
NSF	Yes	Yes	
USDA	Yes	Yes	
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
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

Descriptive Properties

Colors	Tan(Natural) or Black	
Machinability	5	1-10, 1=Easier to Machine