



PEEK KT820 NT

Unfilled PEEK

DESCRIPTION

Unfilled PEEK is recognized as having the best balance of chemical, wear, and heat resistance among all thermoplastics. It is FDA compliant, making it suitable for many direct food contact and medical applications, along with electrical and life science components, where purity is critical. Drake's KT820 NT is melt filtered and fully stress relieved to enhance both the cleanliness and stability of machined parts.

TYPICAL APPLICATIONS:

- Back-up rings
- Seal & valve components
- High temperature insulators

Material Notes: KT820 NT is Solvay's high viscosity equivalent to Victrex 450G and Evonik's Vestakeep 4000.

EXTRUDED SHAPES PROPERTIES

PHYSICAL PROPERTIES	METRIC	IMPERIAL	METHODS
Specific Gravity	1.30 g/cc	0.047 lb/in ³	ASTM D792
Water Absorption	0.1%	0.1%	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	0.5%	0.5%	Immersion; ASTM D570(2)
MECHANICAL PROPERTIES*			
Hardness, Rockwell M	100	100	ASTM D785
Hardness, Rockwell	125	125	ASTM D785
Hardness, Shore D	85	85	ASTM D2240
Tensile Strength, Ultimate	103 MPa	15,000 PSI	ASTM D638
Elongation at Break	20%	20%	ASTM D638
Tensile Modulus	4140 MPa	600,000 PSI	ASTM D638
Flexural Modulus	4140 MPa	600,00 PSI	ASTM D790
Flexural Yield Strength	172 MPa	25,000 PSI	ASTM D790
Compressive Strength	138 MPa	20,000 PSI	10% Def.; ASTM D695
Compressive Modulus	3500 MPa	500,000 PSI	ASTM D695
Izod Impact (notched)	63 J/m	1.2 ft-lbs/in	ASTM D256 Type A
THERMAL PROPERTIES			
Glass Transition Temp./T _g	340° C	644° F	ASTM D3418
Heat Deflection Temperature (264 PSI)	160° C	320° F	ASTM D648
Coefficient of Linear Thermal Expansion	4.68 x 10 ⁻⁵ C ⁻¹	2.6 x 10 ⁻⁵ F ⁻¹	ASTM E831

*The mechanical properties of extruded shapes may differ from the values published by resin producers. Published resin data is always generated from test specimens injection molded under optimum conditions. Drake's extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining, enhanced crystallinity as a result of processing, and fiber alignment inherent in all reinforced plastic shapes, regardless of process. For additional information on the effects of fiber alignment, see Drake Fiber Orientation Diagram, available on the Resource page of our website.