



LEHIGH VALLEY PLASTICS

We Shape The Industry

Ketron® PEEK-HPV Polyetheretherketone; PTFE, Graphite, and Carbon Fiber Filled Bearing Grade

MECHANICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Specific Gravity	1.44	ASTM D792	1.44
Tensile Strength, psi	11000	ASTM D638	76 MPa
Tensile Modulus, psi	850000	ASTM D638	5,861 MPa
Elongation, %	2	ASTM D638	2 %
Flexural Strength, psi	27500	ASTM D790	190 MPa
Flexural Modulus, psi	1100000	ASTM D790	7,585 MPa
Shear Strength, psi	10000	ASTM D732	69 MPa
Compressive Strength, psi	26700	ASTM D695, 10% Def.	184 MPa
Compressive Modulus, psi	1000000	ASTM D695	6,895 MPa
Hardness, Rockwell M	85	ASTM D785	85
Izod Impact (Notched), ft-lb/in	0.7	ASTM D256 Type A	37 J/m
Coefficient of Friction, Dynamic	0.21	Dry vs. Steel, QTM55007	0.21
Limiting PV, psi-fpm	20000	4:1 safety factor; QTM 55007	0.70 MPa-m/sec
k (wear) factor, 10 ⁻¹⁰ in ³ -min/lb-ft-hr	100	QTM 55010	100 10 ⁻¹⁰ in ³ -min/lb-ft-hr
Relative Machinability	7	1-10, 1=Easier to Machine	7
THERMAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Coefficient of Thermal Expansion, 10E-4/°F	0.17	ASTM E831 (-40°F to 300°F)	0.31 10 ⁻⁴ /K
Deflection Temperature 264 psi, °F	383	ASTM D648	195 °C
Melting Point (Crystalline) Peak, °F	644	ASTM D3418	340 °C
Continuous Service in Air (Max), °F	482	Long Term	250 °C
Thermal Conductivity, BTU-in/hr-ft ² -°F	1.7	ASTM F433	0.24 W/m-K
ELECTRICAL PROPERTIES	VALUES	COMMENTS	METRIC VALUES
Surface Resistance, Ohm/Square	10000	Upper Limit; EOS/ESD S11.111	10000 Ohm/Square
CHEMICAL PROPERTIES	ENGLISH VALUES	COMMENTS	METRIC VALUES
Water Absorption Immersion, 24 hr., %	0.05	ASTM D570(2)	0.05 %
Water Absorption Immersion Sat, %	0.3	ASTM D570(2)	0.3 %
Acids, Weak (acetic, dilute HCl)	3	Acceptable Service	3
Acids, Strong (conc. HCl or sulfuric)	2	Limited Service	2
Alkalies, Weak (dilute NaOH)	3	Acceptable Service	3
Alkalies, Strong (conc. NaOH)	3	Acceptable Service	3
Hydrocarbons, Aromatic (toluene)	3	Acceptable Service	3
Hydrocarbons, Aliphatic (gasoline)	3	Acceptable Service	3
Ketones, Esters (acetone)	3	Acceptable Service	3
Ethers (diethyl ether, THF)	3	Acceptable Service	3
Chlorinated Solvents (methylene chloride)	3	Acceptable Service	3
Alcohols (methanol, anti-freeze)	3	Acceptable Service	3
Continuous Sunlight	3	Acceptable Service	3
COMPLIANCE	ENGLISH VALUES	COMMENTS	METRIC VALUES
Flammability, UL94 (5=V-0; 4=V-1; 3=V-2; 1=HB)	5 (V-0)	UL94; 1/8 inch	5
FDA (1=Yes)	0	Not Compliant	0

IMPORTANT: The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. Lehigh Valley Plastics, Inc. will not be held responsible for the use of this information relative to actual application.