

Material Properties

Graphite and PTFE Filled Polyimide

Material code: 6030

The fillers reduce friction and counter face wear, while increasing machinability and process ability. Typical applications include rotary seals, thrust washers and discs, bushings and bearings, plungers, wear pads and strips and other high temperature, high pressure and/or velocity (PV) environments. PI is not suitable for steam service.

Physical Properties	ASTM Method	Typical Values
Specific Gravity	D792	1.46 gr/cm ³
Water Absorption (24 hrs. @ 74°F)	D570	0.65 %
Color	N/A	Black
Mechanical Properties		
Tensile Strength	D1708	6000 psi
Elongation	D1708	
• At Break		2.5%
Flexural Strength	D790	10,000 psi
Flexural Modulus	D790	400,000 psi
Compressive Strength	D695	11,000 psi
Compressive Modulus	D695	200,000 psi
Impact Strength (Izod, notched)	D256	0.6 ft-lb/in
Hardness	Shore D	78
Tribological Properties		
Coefficient of friction	D3702	
• Static		0.25
• Dynamic		0.15
Wear rate (PV: 20,000 psi-fpm)	D3702	1.1 uin/min
Thermal Properties		
Coefficient of Linear Thermal Expansion (78-400°F)	D696	35 10 ⁻⁶ °F
Heat Deflection Temperature (F/C @ 264 psi)	D648	680°F
Glass Transition Temperature (T _g)	D3418	625°F
Melting Point		N/A
Continuous Service Temperature (Max @ no load)		600°F
Electrical Properties		
Volume Resistivity (ohm-cm) @ 50% RH	D257	10 ⁹ ohm-cm
Dielectric Strength	D149	KV/mm
Dielectric Constant	D150	Hz, 200°F

Note: Property values should be interpreted as typical rather than minimum value. All technical information and recommendations are presented in good faith, and based upon laboratory and real-world tests believe to be reliable and practical. However, K.C. Seals, Inc. cannot guarantee the accuracy or completeness of this information, and it is the customers' responsibility to determine product suitability to any given application.

