Material Properties

Graphite Filled Polyimide

Material code: 6020

It is used in high temperature environments where long life, lowest coefficient of friction, and maximum machinability is most desirable, but the full strength of unfilled Polyimide is not required.

Physical Properties	ASTM Method	Typical Values
Specific Gravity	D792	1.56 gr/cm 3
Water Absorption (24 hrs. @ 74°F)	D570	0.84 %
Color	N/A	Black
Mechanical Properties		
Tensile Strength	D1708	6500 psi
Elongation	D1708	
• At Break		2.0%
Flexural Strength	D790	9000 psi
Flexural Modulus	D790	600,000 psi
Compressive Strength	D695	13,000 psi
Compressive Modulus	D695	385,000 psi
Impact Strength (Izod, notched)	D256	0.5 ft-lb/in
Hardness	Shore D	78
Tribological Properties		
Coefficient of friction	D3702	
• Static		0.32
• Dynamic		0.17
Wear rate (PV: 20,000 psi-fpm)	D3702	1.0 uin/min
Thermal Properties		
Coefficient of Linear Thermal Expansion (78-400°F)	D696	21 10 -6 °F
Heat Deflection Temperature (F/C @ 264 psi)	D648	680°F
Glass Transition Temperature (Tg)	D3418	625°F
Melting Point		N/A
Continuous Service Temperature (Max @ no load)		600°F
Electrical Properties		
Volume Resistivity (ohm-cm) @ 50% RH	D257	10^3 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.

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