

Mitsui AURUM® JCL3030 Polyimide, Carbon Fiber Filled (discontinued **)

Category : Polymer , Thermoplastic , Polyimide, Thermoplastic

Material Notes:

AURUM JCL3030 is a high-performance polyimide for precision injection molded components and extruded products. A member of the AURUM family of advanced engineering resins, carbon fiber reinforced AURUM JCL3030 offers a unique balance of mechanical, thermal, and tribological properties for outstanding performance in demanding automotive, business machinery, industrial equipment, aerospace, and semiconductor equipment applications. AURUM components offer excellent mechanical strength and toughness, dimensional stability, low outgassing, and exceptional radiation resistance. In addition, AURUM exhibits outstanding resistance to hydraulic, automotive, and many industrial fluids and solvents, a low coefficient of thermal expansion, creep resistance, and flame retardancy. AURUM JCL3030 withstands high PV levels and provides a low wear factor and low friction surface over a broad temperature range in both dry and lubricated environments. Applications: AURUM JCL3030 components are excellent replacements for metals, ceramics, and other plastics. High performance AURUM parts include: thrust washers and oil seal rings for automotive and off road vehicle transmissions, thermal insulators and stripper fingers for high-speed copiers, jet engine components, check valve balls, spline couplings, heat-resistant gears, vanes, wear strips, and valve seats. Other AURUM applications include carriers for aluminum hard disks and silicon wafers, journal bearings, and bearing retainers. Information provided by DuPont

Order this product through the following link:

http://www.lookpolymers.com/polymer_Mitsui-AURUM-JCL3030-Polyimide-Carbon-Fiber-Filled-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.42 g/cc	1.42 g/cc	ASTM D792
Filler Content	30 %	30 %	
Water Absorption	0.23 %	0.23 %	24 hrs @ 73°F; ASTM D570
Linear Mold Shrinkage	0.0025 cm/cm	0.0025 in/in	
Melt Flow	27 - 37 g/10 min @Load 10.0 kg, Temperature 420 °C	27 - 37 g/10 min @Load 22.0 lb, Temperature 788 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	230 MPa	33300 psi	ASTM D638
	141 MPa @Temperature 149 °C	20500 psi @Temperature 300 °F	ASTM D638
Elongation at Yield	2.0 %	2.0 %	ASTM D638
	4.0 % @Temperature 149 °C	4.0 % @Temperature 300 °F	ASTM D638
Flexural Strength	314 MPa	45600 psi	ASTM D790

Mechanical Properties	Metric	English	Comments
	@Temperature 149 °C	@Temperature 300 °F	ASTM D790
Flexural Modulus	17.2 GPa	2500 ksi	ASTM D790
	15.2 GPa	2200 ksi	ASTM D790
	@Temperature 149 °C	@Temperature 300 °F	
Compressive Strength	102 MPa	14800 psi	JIS K7208
	@Temperature 149 °C	@Temperature 300 °F	
	207 MPa	30000 psi	JIS K7208
	@Temperature 22.8 °C	@Temperature 73.0 °F	
Izod Impact, Notched	1.07 J/cm	2.00 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	5.94 $\mu\text{m}/\text{m}\cdot\text{°C}$	3.30 $\mu\text{in}/\text{in}\cdot\text{°F}$	MD; ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
	46.8 $\mu\text{m}/\text{m}\cdot\text{°C}$	26.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	TD; ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Melting Point	388 °C	730 °F	DSC
Deflection Temperature at 0.46 MPa (66 psi)	248 °C	478 °F	ASTM D648
Glass Transition Temp, Tg	250 °C	482 °F	DSC

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