

Mitsui AURUM® JGN3030 Polyimide, Glass Fiber Filled (discontinued **)

Category : Polymer , Thermoplastic , Polyimide, Thermoplastic

Material Notes:

AURUM JGN3030 is a high performance thermoplastic polyimide for precision injection molded components and extruded products. A member of the AURUM family of advanced engineering resins, glass fiber reinforced AURUM JGN3030 offers a unique balance of mechanical and thermal properties for superior performance in demanding automotive, business machinery, industrial equipment, aerospace, and semiconductor equipment applications. AURUM exhibits outstanding resistance to chemicals and radiation, a low coefficient of thermal expansion, excellent electrical properties, and flame resistance. Applications: AURUM JGN3030 injection molded components are excellent replacements for metals, ceramics, and other plastics. High performance AURUM JGN3030 parts include heat-resistant gears, semiconductor manufacturing and handling equipment components, and thermal and electrical insulators. Information provided by DuPont

Order this product through the following link:

http://www.lookpolymers.com/polymer_Mitsui-AURUM-JGN3030-Polyimide-Glass-Fiber-Filled-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.56 g/cc	1.56 g/cc	ASTM D792
Water Absorption	0.23 %	0.23 %	24 hrs @ 73°F; ASTM D570
Moisture Absorption at Equilibrium	0.10 %	0.10 %	73°F; 60 RH, 24hrs
Linear Mold Shrinkage	0.0044 cm/cm	0.0044 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	165 MPa	23900 psi	ASTM D638
	106 MPa @Temperature 149 °C	15400 psi @Temperature 300 °F	ASTM D638
Elongation at Yield	3.0 %	3.0 %	ASTM D638
	4.0 % @Temperature 149 °C	4.0 % @Temperature 300 °F	ASTM D638
Flexural Strength	241 MPa	35000 psi	ASTM D790
	172 MPa @Temperature 149 °C	25000 psi @Temperature 300 °F	ASTM D790
Flexural Modulus	9.65 GPa	1400 ksi	ASTM D790
	8.27 GPa @Temperature 149 °C	1200 ksi @Temperature 300 °F	ASTM D790

Mechanical Properties	88.3 MPa Metric	12800 psi English	Comments
	@Temperature 149 °C	@Temperature 300 °F	
	188 MPa	27300 psi	JIS K7208
	@Temperature 22.8 °C	@Temperature 73.0 °F	
Izod Impact, Notched	1.17 J/cm	2.20 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	16.2 µm/m-°C	9.00 µin/in-°F	MD; ASTM D696
	@Temperature 22.8 °C	@Temperature 73.0 °F	
	52.2 µm/m-°C	29.0 µin/in-°F	TD; ASTM D696
	@Temperature 73.0 °C	@Temperature 163 °F	
Specific Heat Capacity	0.962 J/g-°C	0.230 BTU/lb-°F	DSC
	0.9623 J/g-°C	0.2300 BTU/lb-°F	DSC
	@Temperature 100 °C	@Temperature 212 °F	
	1.339 J/g-°C	0.3200 BTU/lb-°F	DSC
	@Temperature 300 °C	@Temperature 572 °F	
Thermal Conductivity	0.348667 W/m-K	2.41975 BTU-in/hr-ft ² -°F	
Melting Point	388 °C	730 °F	DSC
Deflection Temperature at 0.46 MPa (66 psi)	245 °C	473 °F	ASTM D648
Glass Transition Temp, Tg	250 °C	482 °F	DSC
Flammability, UL94	V-0	V-0	
	@Thickness 0.400 mm	@Thickness 0.0157 in	

Electrical Properties	Metric	English	Comments
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Constant	3.7	3.7	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.8	3.8	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	0.0012	0.0012	ASTM D150

Electrical Properties	@Frequency 1000 Hz Metric	@Frequency 1000 Hz English	Comments
	0.0036	0.0036	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

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