

Mitsui Arlen,ç A315 15% Glass Fiber-Reinforced Modified Nylon 6T (DAM)

Category : Polymer , Thermoplastic , Nylon

Material Notes:

ARLEN,ç is a heat resistant, modified polyamide 6T developed by Mitsui Chemicals, Inc. With a high melting point (320Å°C) and a rigidity level comparable to super engineering plastics, it possesses strong dimensional stability and chemical resistance. In addition, the effect of water absorption, which is a traditional weakness of polyamides, has been reduced to a minimum. Applications: Cylinder head covers Thermostat cases Oil pump housings Hydraulic system pistons Cooling system parts Roller/pulley parts Information provided by Mitsui.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Mitsui-Arlen-A315-15-Glass-Fiber-Reinforced-Modified-Nylon-6T-DAM.php

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/in ³	ASTM D792
Filler Content	15 %	15 %	
Water Absorption	0.4 % @Thickness 2.00 mm	0.4 % @Thickness 0.0787 in	24 hours in 23Å°C water; ASTM D570
	2.5 % @Thickness 2.00 mm	2.5 % @Thickness 0.0787 in	24 hours in 100Å°C water; ASTM D570
Linear Mold Shrinkage, Flow	0.0050 cm/cm @Thickness 2.00 mm	0.0050 in/in @Thickness 0.0787 in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0060 cm/cm @Thickness 2.00 mm	0.0060 in/in @Thickness 0.0787 in	Vertical Direction; ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	105	105	ASTM D785
Tensile Strength at Break	120 MPa	17400 psi	ASTM D638
Elongation at Break	3.0 %	3.0 %	Measured between the chucks; ASTM D638
Flexural Strength	190 MPa	27600 psi	ASTM D790
Flexural Modulus	6.00 GPa	870 ksi	ASTM D790
Izod Impact, Notched	0.500 J/cm	0.937 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
	55.0 Åµm/m-Å°C	30.6 Åµin/in-Å°F	

Thermal Properties	Metric	English	Comments
	@Temperature 20.0 °C	@Temperature 68.0 °F	Vertical Direction; ASTM D696
CTE, linear, Parallel to Flow	34.0 µm/m-°C @Temperature 20.0 °C	18.9 µin/in-°F @Temperature 68.0 °F	ASTM D696
Melting Point	320 °C	608 °F	
Deflection Temperature at 1.8 MPa (264 psi)	290 °C	554 °F	ASTM D648
Glass Transition Temp, Tg	125 °C	257 °F	
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Dielectric Constant	4.2 @Frequency 1e+6 Hz	4.2 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	25.0 kV/mm	635 kV/in	ASTM D149
Dissipation Factor	0.020 @Frequency 1e+6 Hz	0.020 @Frequency 1e+6 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Feed Temperature	50.0 - 90.0 °C	122 - 194 °F	Hopper Bottom Temp for Mechanical and Structural Standard Molding
	50.0 - 90.0 °C	122 - 194 °F	Hopper Bottom for Electronic and Electric Standard Molding
Nozzle Temperature	315 - 335 °C	599 - 635 °F	NH Cylinder Temp for Electronic and Electric Standard Molding
	325 - 340 °C	617 - 644 °F	NH Cylinder Temp for Mechanical and Structural Standard Molding
Zone 1	300 - 325 °C	572 - 617 °F	C1 Cylinder Temp for Electronic and Electric Standard Molding
	315 - 330 °C	599 - 626 °F	C1 Cylinder Temp for Mechanical and Structural Standard Molding
Zone 2	315 - 335 °C	599 - 635 °F	C2 Cylinder Temp for Electronic and Electric Standard Molding
	320 - 335 °C	608 - 635 °F	C2 Cylinder Temp for Mechanical and Structural Standard Molding
Zone 3	320 - 335 °C	608 - 635 °F	C3 Cylinder Temp for Electronic and Electric Standard Molding

Processing Properties	Metric 90.0 - 140 Â°C	English 194 - 284 Â°F	Comments Temp for Mechanical and Structural Standard Molding
Mold Temperature	90.0 - 140 Â°C	194 - 284 Â°F	for Mechanical and Structural Standard Molding
	90.0 - 140 Â°C	194 - 284 Â°F	for Electronic and Electric Standard Molding
Screw Speed	150 rpm	150 rpm	for Mechanical and Structural Standard Molding
	150 rpm	150 rpm	for Electronic and Electric Standard Molding

Descriptive Properties	Value	Comments
Injection Pressure	Medium	Electronic and Electric Standard Molding
	Medium	Mechanical and Structural Standard Molding
Injection Speed	Medium	Electronic and Electric Standard Molding
	Medium	Mechanical and Structural Standard Molding

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