Mitsui Arlen™ AE4200 Modified Nylon 6T, for Tribolic Applications (DAM)

Category : Polymer , Thermoplastic , Nylon

Material Notes:

ARLEN™ is a heat resistant, modified polyamide 6T developed by Mitsui Chemicals, Inc. With a high melting point (320°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: Light-load tribological application parts of office automation equipmentInformation provided by Mitsui.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Mitsui-Arlen-AE4200-Modified-Nylon-6T-for-Tribolic-Applications-DAM.php

Physical Properties	Metric	English	Comments
Density	1.10 g/cc	0.0397 lb/in³	ASTM D792
Water Absorption	0.4 % @Thickness 2.00 mm	0.4 % @Thickness 0.0787 in	24 hours in 23°C water; ASTM D570
	2.6 % @Thickness 2.00 mm	2.6 % @Thickness 0.0787 in	24 hours in 100°C water; ASTM D570
Linear Mold Shrinkage, Flow	0.0090 cm/cm @Thickness 2.00 mm	0.0090 in/in @Thickness 0.0787 in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0090 cm/cm @Thickness 2.00 mm	0.0090 in/in @Thickness 0.0787 in	Vertical Direction; ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	65	65	ASTM D785
Hardness, Rockwell R	110	110	ASTM D785
Tensile Strength at Break	80.0 MPa @Thickness 2.00 mm	11600 psi @Thickness 0.0787 in	ASTM D638
Elongation at Break	50 %	50 %	Measured between the chucks, 2mmt; ASTM D638
Flexural Strength	110 MPa	16000 psi	ASTM D790
Flexural Modulus	2.40 GPa	348 ksi	ASTM D790
Izod Impact, Notched	2.00 J/cm	3.75 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
	82.0 µm/m-°C	45.6 µin/in-°F	

Thermal Properties	Metric	English	Comments
CTE, linear	@Temperature 20.0 °C	@Temperature 68.0 °F	Vertical Direction; ASTM D696
CTE, linear, Parallel to Flow	80.0 µm/m-°C @Temperature 20.0 °C	44.4 µin/in-°F @Temperature 68.0 °F	ASTM D696
Melting Point	320 °C	608 °F	
Deflection Temperature at 1.8 MPa (264 psi)	135 °C	275 °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	3.3 @Frequency 1e+6 Hz	3.3 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	23.0 kV/mm	584 kV/in	ASTM D149
Dissipation Factor	0.018 @Frequency 1e+6 Hz	0.018 @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
			C3 Cylinder Temp for Mechanical and

Processing Properties	Metric	English	Comments
	325 - 340 °C	617 - 644 °F	Structural Standard Molding
Mold Temperature	50.0 - 90.0 °C	122 - 194 °F	for Mechanical and Structural Standard Molding
	90.0 - 140 °C	194 - 284 °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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