

Mitsui Arlen,ç AE4200N Modified Nylon 6T, for Tribolic Applications, Flame Retardant (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 (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 equipment. Information provided by Mitsui.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Mitsui-Arlen-AE4200N-Modified-Nylon-6T-for-Tribolic-Applications-Flame-Retardant-DAM.php

Physical Properties	Metric	English	Comments
Density	1.40 g/cc	0.0506 lb/in ³	ASTM D792
Water Absorption	0.3 %	0.3 %	24 hours in 23°C water; ASTM D570
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	2.0 %	2.0 %	24 hours in 100°C water; ASTM D570
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Flow	0.0080 cm/cm	0.0080 in/in	ASTM D955
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	Vertical Direction; ASTM D955
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	80	80	ASTM D785
Tensile Strength at Break	70.0 MPa	10200 psi	ASTM D638
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Elongation at Break	4.0 %	4.0 %	Measured between the chucks, 2mm; ASTM D638
Flexural Strength	120 MPa	17400 psi	ASTM D790
Flexural Modulus	3.00 GPa	435 ksi	ASTM D790
Izod Impact, Notched	0.700 J/cm	1.31 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
	67.0 µm/m-°C	37.2 µin/in-°F	

CTE, linear Thermal Properties	Metric @ Temperature 20.0 Â°C	English @ Temperature 68.0 Â°F	Vertical Direction; ASTM D696 Comments
CTE, linear, Parallel to Flow	65.0 Âµm/m-Â°C @Temperature 20.0 Â°C	36.1 Âµin/in-Â°F @Temperature 68.0 Â°F	ASTM D696
Melting Point	320 Â°C	608 Â°F	
Deflection Temperature at 1.8 MPa (264 psi)	145 Â°C	293 Â°F	ASTM D648
Glass Transition Temp, Tg	125 Â°C	257 Â°F	
Flammability, UL94	V-0	V-0	

Optical Properties	Metric	English	Comments
Transmission, Visible	92 %	92 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	3.3 @Frequency 1e+6 Hz	3.3 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	31.0 kV/mm	787 kV/in	ASTM D149
Dissipation Factor	0.014 @Frequency 1e+6 Hz	0.014 @Frequency 1e+6 Hz	ASTM D150

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

Processing Properties	Metric 335 Â°C	English 335 Â°F	Comments C3 Cylinder Temp for Mechanical and Structural Standard Molding
Zone 3	320 - 335 Â°C	608 - 635 Â°F	C3 Cylinder Temp for Electronic and Electric Standard Molding
	325 - 340 Â°C	617 - 644 Â°F	C3 Cylinder Temp for Mechanical and Structural Standard Molding
Mold Temperature	50.0 - 90.0 Â°C	122 - 194 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 Electronic and Electric Standard Molding
	150 rpm	150 rpm	for Mechanical and Structural 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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