

## Mitsui Arlenâ„ç A350 50% Glass Fiber-Reinforced Modified Nylon 6T (DAM)

Category : Polymer , Thermoplastic , Nylon

### Material Notes:

ARLENâ„ç is a heat resistant, modified polyamide 6T developed by Mitsui Chemicals, Inc. With a high melting point (320Â°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 coversThermostat casesOil pump housingsHydraulic system pistonsCooling system partsRoller/pulley partsInformation provided by Mitsui.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Mitsui-Arlen-A350-50-Glass-Fiber-Reinforced-Modified-Nylon-6T-DAM.php](http://www.lookpolymers.com/polymer_Mitsui-Arlen-A350-50-Glass-Fiber-Reinforced-Modified-Nylon-6T-DAM.php)

Physical Properties	Metric	English	Comments
Density	1.63 g/cc	0.0589 lb/inÂ³	ASTM D792
Filler Content	50 %	50 %	
Water Absorption	0.20 %	0.20 %	24 hours in 23Â°C water; ASTM D570
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	1.2 %	1.2 %	24 hours in 100Â°C water; ASTM D570
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ASTM D955
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	Vertical Direction; ASTM D955
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	110	110	ASTM D785
Tensile Strength at Break	300 MPa	43500 psi	ASTM D638
Elongation at Break	3.0 %	3.0 %	Measured between the chucks; ASTM D638
Flexural Strength	430 MPa	62400 psi	ASTM D790
Flexural Modulus	17.0 GPa	2470 ksi	ASTM D790
Izod Impact, Notched	1.50 J/cm	2.81 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
	42.0 Âµm/m-Â°C	23.3 Âµin/in-Â°F	

Thermal Properties	Metric	English	Comments
	@Temperature 20.0 Â°C	@Temperature 68.0 Â°F	Vertical Direction; ASTM D696
CTE, linear, Parallel to Flow	18.0 Âµm/m-Â°C @Temperature 20.0 Â°C	10.0 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)	310 Â°C	590 Â°F	ASTM D648
Glass Transition Temp, Tg	125 Â°C	257 Â°F	
Flammability, UL94	HB	HB	Equivalent

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Dielectric Constant	4.5 @Frequency 1e+6 Hz	4.5 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	29.0 kV/mm	737 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 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
	320 - 335 Â°C	608 - 635 Â°F	C2 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

Processing Properties	Metric 323 - 340 Â°C	English 512 - 644 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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