BASF Ultramid® A4H PA66 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Unreinforced

Material Notes:

Description: Highly heat aging resistant, medium-viscosity injection-molding grade for highly stressed parts such as bearing cages, gearwheels, spool bodies and chain drive tensioners.Information provided by BASF

Order this product through the following link:
http://www.lookpolymers.com/polymer_BASF-Ultramid-A4H-PA66-Dry.php

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in³	
Density	1.13 g/cc	0.0408 lb/in³	ISO 1183
Water Absorption	8.0 - 9.0 %	8.0 - 9.0 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	2.5 - 3.1 %	2.5 - 3.1 %	23°C; 50% RH; ISO 62
Viscosity Measurement	190	190	ISO 307
Linear Mold Shrinkage	0.0090 cm/cm	0.0090 in/in	restricted
Melt Flow	45.2 g/10 min @Load 5.00 kg, Temperature 275 °C	45.2 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	85.0 MPa	12300 psi	50 mm/min; ISO 527-1/-2
Elongation at Break	25 %	25 %	Nominal, 50mm/min; ISO 527-1/-2
Elongation at Yield	4.2 %	4.2 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	3.10 GPa	450 ksi	ISO 527-1/-2
Flexural Modulus	3.00 GPa	435 ksi	ISO 178
Izod Impact, Notched (ISO)	5.50 kJ/m² @Temperature 23.0 °C	2.62 ft-lb/in² @Temperature 73.4 °F	ISO 180/A
	7.00 kJ/m² @Temperature -30.0 °C	3.33 ft-lb/in² @Temperature -22.0 °F	ISO 180/A
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
Charpy Impact, Notched	0.500 J/cm² @Temperature -30.0 °C	2.38 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1000 hours	700 MPa @Strain <=0.500 %	102000 psi @Strain <=0.500 %	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 - 100 µm/m-°C @Temperature 23.0 - 80.0 °C	38.9 - 55.6 µin/in-°F @Temperature 73.4 - 176 °F	DIN 11359-1/-2
Specific Heat Capacity	1.70 J/g-°C	0.406 BTU/lb-°F	
Thermal Conductivity	0.330 W/m-K	2.29 BTU-in/hr-ft²-°F	DIN 52612
Melting Point	260 °C	500 °F	DIN 53765
Maximum Service Temperature, Air	118 °C	244 °F	for 50% loss of tensile strength after 20000hr
	138 °C	280 °F	for 50% loss of tensile strength after 5000hr
	200 °C	392 °F	
Deflection Temperature at 0.46 MPa (66 psi)	220 °C	428 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	75.0 °C	167 °F	ISO 75-1/-2
Decomposition Temperature	>= 310 °C	>= 590 °F	
Flammability, UL94	V-2 @Thickness 1.60 mm	V-2 @Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.5 @Frequency 1.00 Hz	3.5 @Frequency 1.00 Hz	IEC 60250
Dissipation Factor	0.025 @Frequency 1.00e+6 Hz	0.025 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	Test solution A; IEC 60112

Processing Properties	Metric	English	Comments

Processing Properties	Metric	English	Comments
Zone 1	290 °C	554 °F	Feed zone
Zone 2	290 °C	554 °F	Compression
Zone 3	290 °C	554 °F	Metering-zone
Zone 4	290 °C	554 °F	Nozzle
Melt Temperature	290 °C	554 °F	Optimal
	290 - 300 °C	554 - 572 °F	Injection-molding/Extrusion
Mold Temperature	40.0 - 80.0 °C	104 - 176 °F	Injection-molding
	60.0 °C	140 °F	Optimal
Drying Temperature	80.0 °C	176 °F	
Dry Time	4 hour	4 hour	
Moisture Content	0.030 - 0.060 %	0.030 - 0.060 %	Optimal
	<= 0.15 %	<= 0.15 %	

Descriptive Properties	Value	Comments
Commercial Status	Europe	
Ignition Temperature	>400°C	ASTM D1929
Peripheral screw speed	< 0.3 m/s	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China