

Eurostar Staramide B40 PA6, Extrusion

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Extruded

Material Notes:

Staramide B40 is High Viscosity, Unreinforced Polyamide 6, Extrusion Resin Information provided by Eurostar.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eurostar-Staramide-B40-PA6-Extrusion.php

Physical Properties	Metric	English	Comments
Density	1.13 g/cc	0.0408 lb/in ³	ISO 1183
Moisture Absorption	2.35 % @Temperature 23.0 °C	2.35 % @Temperature 73.4 °F	50% RH; ISO 62
Water Absorption at Saturation	10 % @Temperature 23.0 °C	10 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.011 - 0.015 cm/cm	0.011 - 0.015 in/in	on Tensile Bar; E2P method

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	121	121	ISO 2039-2
Hardness, H358/30	121 MPa	17500 psi	ISO 2039-1
Tensile Strength, Yield	80.0 MPa	11600 psi	50 mm/min; ISO 527
Elongation at Break	15 %	15 %	50 mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527
Tensile Modulus	3.10 GPa	450 ksi	1 mm/min; ISO 527
Flexural Yield Strength	100 MPa	14500 psi	2 mm/min; ISO 178
Flexural Modulus	2.65 GPa	384 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	3.00 kJ/m ² @Temperature -40.0 °C	1.43 ft-lb/in ² @Temperature -40.0 °F	80x10x4; ISO 180/1A
	4.00 kJ/m ² @Temperature -20.0 °C	1.90 ft-lb/in ² @Temperature -4.00 °F	80x10x4; ISO 180/1A
	4.00 kJ/m ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	80x10x4; ISO 180/1A
	5.00 kJ/m ²	2.38 ft-lb/in ²	80x10x4; ISO 180/1A

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Izod Impact, Unnotched (ISO)	>= 100 kJ/m ² @Temperature 23.0 °C	>= 47.6 ft-lb/in ² @Temperature 73.4 °F	80x10x4; ISO 180/1U
	>= 100 kJ/m ² @Temperature -30.0 °C	>= 47.6 ft-lb/in ² @Temperature -22.0 °F	80x10x4; ISO 180/1U
Charpy Impact Unnotched	>= 27.0 J/cm ² @Temperature 23.0 °C	>= 128 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
	>= 27.0 J/cm ² @Temperature -30.0 °C	>= 128 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
Charpy Impact, Notched	0.300 J/cm ² @Temperature 23.0 °C	1.43 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
	0.300 J/cm ² @Temperature -30.0 °C	1.43 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	10 @Load 1.00 kg	10 @Load 2.20 lb	CS-17; E2P Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C @Temperature 23.0 - 60.0 °C	38.9 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow	70.0 µm/m-°C @Temperature 23.0 - 60.0 °C	38.9 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ft ² -°F	ISO 8302
Hot Ball Pressure Test	123 - 127 °C	253 - 261 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	180 °C	356 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	65.0 °C	149 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Ae
Vicat Softening Point	215 °C	419 °F	B/120; ISO 306
	217 °C	423 °F	B/50; ISO 306
UL RTI, Electrical	65.0 °C	149 °F	
UL RTI, Mechanical with Impact	65.0 °C	149 °F	

Thermal Properties	65.0 °C Metric	149 °F English	Comments
Flammability, UL94	HB	HB	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	24 %	24 %	ISO 4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+16 ohm	>= 1.00e+16 ohm	IEC 60093
Dielectric Constant	3.0	3.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.3	3.3	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0058	0.0058	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.018	0.018	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112
	600 V	600 V	M; IEC 60112

Processing Properties	Metric	English	Comments
Zone 1	230 - 240 °C	446 - 464 °F	
Zone 2	240 - 250 °C	464 - 482 °F	
Zone 3	250 - 260 °C	482 - 500 °F	
Melt Temperature	250 - 260 °C	482 - 500 °F	
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	

Processing Properties	Metric 95.0 °C	English 205 °F	Comments
Drying Temperature	@Time 14400 - 21600 sec	@Time 4.00 - 6.00 hour	
Moisture Content	0.20 %	0.20 %	

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