

Eurostar Staramide BG4H PA6, 20% Glass Filled, Injection Molded

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 20% Glass Fiber Filled , Nylon 6, Heat Stabilized

Material Notes:

BG4H is a Heat Stabilized, 20% Glass Fiber Reinforced Polyamide 6 Injection Molding Resin. Information provided by Polymer Technology & Services, the North American exclusive supplier.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eurostar-Staramide-BG4H-PA6-20-Glass-Filled-Injection-Molded.php

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in ³	ISO 1183
Moisture Absorption	1.40 % @Temperature 23.0 °C	1.40 % @Temperature 73.4 °F	50% RH; ISO 62
Water Absorption at Saturation	6.8 % @Temperature 23.0 °C	6.8 % @Temperature 73.4 °F	ISO 62-1
Linear Mold Shrinkage, Flow	0.0030 - 0.0060 cm/cm	0.0030 - 0.0060 in/in	on Tensile Bar; ISO 294

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	123	123	ISO 2039-2
Tensile Strength at Break	145 MPa	21000 psi	5 mm/min; ISO 527
Elongation at Break	3.8 %	3.8 %	5 mm/min; ISO 527
Tensile Modulus	6.50 GPa	943 ksi	1 mm/min; ISO 527
Flexural Strength	200 MPa	29000 psi	2 mm/min; ISO 178
Flexural Modulus	5.80 GPa	841 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	6.00 kJ/m ² @Temperature -40.0 °C	2.86 ft-lb/in ² @Temperature -40.0 °F	80x10x4; ISO 180/1A
	7.00 kJ/m ² @Temperature -20.0 °C	3.33 ft-lb/in ² @Temperature -4.00 °F	80x10x4; ISO 180/1A
	7.00 kJ/m ² @Temperature -30.0 °C	3.33 ft-lb/in ² @Temperature -22.0 °F	80x10x4; ISO 180/1A
	8.00 kJ/m ² @Temperature 23.0 °C	3.81 ft-lb/in ² @Temperature 73.4 °F	80x10x4; ISO 180/1A
	40.0 kJ/m ²	19.0 ft-lb/in ²	

Izod Impact Unnotched (ISO) Mechanical Properties	Metric @ Temperature -30.0 °C	English @ Temperature -22.0 °F	80x10x4; ISO 180/1U Comments
	50.0 kJ/m ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	80x10x4; ISO 180/1U
Charpy Impact Unnotched	4.50 J/cm ² @Temperature -30.0 °C	21.4 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
	5.50 J/cm ² @Temperature 23.0 °C	26.2 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
Charpy Impact, Notched	0.600 J/cm ² @Temperature -30.0 °C	2.86 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
	0.700 J/cm ² @Temperature 23.0 °C	3.33 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	20 @Load 1.00 kg	20 @Load 2.20 lb	CS-17; E2P Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	35.0 µm/m-°C @Temperature 23.0 - 60.0 °C	19.4 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow	95.0 µm/m-°C @Temperature 23.0 - 60.0 °C	52.8 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
Thermal Conductivity	0.330 W/m-K	2.29 BTU-in/hr-ft ² -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	216 °C	421 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	198 °C	388 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Af
Vicat Softening Point	206 °C	403 °F	B/120; ISO 306
	208 °C	406 °F	B/50; ISO 306
UL RTI, Electrical	65.0 °C @Thickness 0.750 mm	149 °F @Thickness 0.0295 in	
	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	
	65.0 °C	149 °F	

Thermal Properties	Metric	English	Comments
UL RTI, Mechanical with Impact	65.0 °C	149 °F	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	65.0 °C	149 °F	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	@Thickness 1.50 mm	@Thickness 0.0591 in	IEC 60695-11-10
Oxygen Index	24 %	24 %	ISO 4589
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	650 °C	1200 °F	IEC 60695-2-12
	@Thickness 2.00 mm	@Thickness 0.0787 in	

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	ROA; IEC 60093
Dielectric Constant	3.4	3.4	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.6	3.6	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	

Electrical Properties	Metric /mm	English in	Comments
Dielectric Strength	@Thickness 3.20 mm	@Thickness 0.126 in	in oil, IEC 60243-1
Dissipation Factor	0.0061	0.0061	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.016	0.016	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	400 V	400 V	M; IEC 60112
	500 V	500 V	IEC 60112

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	230 - 240 °C	446 - 464 °F	Zone 1
Middle Barrel Temperature	240 - 250 °C	464 - 482 °F	Zone 2
Front Barrel Temperature	240 - 270 °C	464 - 518 °F	Zone 3
Melt Temperature	240 - 270 °C	464 - 518 °F	
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	
Drying Temperature	75.0 - 85.0 °C	167 - 185 °F	
Dry Time	4.00 - 6.00 hour	4.00 - 6.00 hour	
Moisture Content	0.20 %	0.20 %	

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