

Eurostar Staramide BG5 PA6, 25% Glass Filled, Injection Molded

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Glass Fiber Filled

Material Notes:

BG5 is a 25% 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-BG5-PA6-25-Glass-Filled-Injection-Molded.php

Physical Properties	Metric	English	Comments
Density	1.31 g/cc	0.0473 lb/in ³	ISO 1183
Water Absorption at Saturation	6.5 % @Temperature 23.0 °C	6.5 % @Temperature 73.4 °F	ISO 62-1
Linear Mold Shrinkage, Flow	0.0020 - 0.0030 cm/cm	0.0020 - 0.0030 in/in	on Tensile Bar; ISO 294

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	150 MPa	21800 psi	5 mm/min; ISO 527
Elongation at Break	3.5 %	3.5 %	5 mm/min; ISO 527
Tensile Modulus	7.90 GPa	1150 ksi	1 mm/min; ISO 527
Flexural Strength	190 MPa	27600 psi	2 mm/min; ISO 178
Flexural Modulus	7.80 GPa	1130 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	7.00 kJ/m ² @Temperature -40.0 °C	3.33 ft-lb/in ² @Temperature -40.0 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	9.00 kJ/m ² @Temperature -20.0 °C	4.28 ft-lb/in ² @Temperature -4.00 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	10.0 kJ/m ² @Temperature 23.0 °C	4.76 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 180/1A
Charpy Impact Unnotched	5.00 J/cm ²	23.8 ft-lb/in ²	Edgew 80x10x4 sp=62; ISO 179/1eU

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	31.0 µm/m-°C @Temperature 23.0 - 60.0 °C	17.2 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
	91.0 µm/m-°C	50.6 µin/in-°F	

CTE linear Transverse to Flow Thermal Properties	Metric @ Temperature 23.0 - 60.0 °C	English @ Temperature 73.4 - 140 °F	ISO 11359-2 Comments
Deflection Temperature at 0.46 MPa (66 psi)	220 °C	428 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	210 °C	410 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Af
Vicat Softening Point	222 °C	432 °F	B/120; ISO 306
UL RTI, Electrical	65.0 °C	149 °F	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	65.0 °C	149 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	65.0 °C	149 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	65.0 °C	149 °F	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	65.0 °C	149 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	65.0 °C	149 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	65.0 °C	149 °F	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	65.0 °C	149 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	65.0 °C	149 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	
	@Thickness 0.750 mm	@Thickness 0.0295 in	IEC 60695-11-10
	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	IEC 60695-11-10
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	IEC 60695-11-10
Oxygen Index	24 %	24 %	ISO 4589

Thermal Properties Glow Wire Test	650 °C Metric	1200 °F English	Comments 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	
Dielectric Strength	20.0 kV/mm	508 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
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	375 V	375 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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