

Eurostar Staramide BG6H PA6, 30% Glass Filled, Injection Molded

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

Material Notes:

BG6 is a Heat Stabilized, 30% 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-BG6H-PA6-30-Glass-Filled-Injection-Molded.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in ³	ISO 1183
Moisture Absorption	1.70 % @Temperature 23.0 °C	1.70 % @Temperature 73.4 °F	50% RH; ISO 62
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 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	on Tensile Bar; ISO 294

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	113	113	ISO 2039-2
Tensile Strength at Break	160 MPa	23200 psi	5 mm/min; ISO 527
Elongation at Break	3.8 %	3.8 %	5 mm/min; ISO 527
Tensile Modulus	9.50 GPa	1380 ksi	1 mm/min; ISO 527
Flexural Strength	230 MPa	33400 psi	2 mm/min; ISO 178
Flexural Modulus	8.00 GPa	1160 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	9.00 kJ/m ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	9.00 kJ/m ² @Temperature -40.0 °C	4.28 ft-lb/in ² @Temperature -40.0 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	10.0 kJ/m ² @Temperature -20.0 °C	4.76 ft-lb/in ² @Temperature -4.00 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	11.0 kJ/m ² @Temperature 23.0 °C	5.23 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	7.50 J/cm ²	35.7 ft-lb/in ²	

Charpy Impact Unnotched Mechanical Properties	Metric @ Temperature -30.0 °C	English @ Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eU Comments
	9.00 J/cm ² @Temperature 23.0 °C	42.8 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
Charpy Impact, Notched	0.900 J/cm ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
	1.10 J/cm ² @Temperature 23.0 °C	5.23 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 µm/m-°C @Temperature 23.0 - 60.0 °C	13.9 µin/in-°F @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow	85.0 µm/m-°C @Temperature 23.0 - 60.0 °C	47.2 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)	220 °C	428 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Af
Vicat Softening Point	215 °C	419 °F	B/120; ISO 306
	215 °C	419 °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 @Thickness 3.00 mm	149 °F @Thickness 0.118 in	
UL RTI, Mechanical with Impact	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 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	65.0 °C	149 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	IEC 60695-11-10
Flame Spread	2.00 mm/min	0.0787 in/min	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	@Thickness 1.50 mm	@Thickness 0.0591 in	IEC 60695-11-10
Oxygen Index	25 %	25 %	ISO 4589
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	IEC 60695-11-10
Glow Wire Test	650 °C	1200 °F	
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	@Thickness 3.00 mm	@Thickness 0.118 in	FMVSS Buring Speed
Dielectric Constant	6.00 mm/min	0.236 in/min	
	@Thickness 2.00 mm	@Thickness 0.0787 in	FMVSS Buring Speed
	@Thickness 3.00 mm	@Thickness 0.118 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	3.3	3.3	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	3.6	3.6	
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
Dielectric Strength	20.0 kV/mm	508 kV/in	
	@Thickness 3.20 mm	@Thickness 0.126 in	in oil; IEC 60243-1

Electrical Properties	Metric	English	Comments
Dissipation Factor	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	0.016	0.016	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
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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