

Eurostar Staramide BG10H PA6, 50% Glass Filled, Injection Molded

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 50% Glass Fiber Filled , Nylon 6, Heat Stabilized

Material Notes:

BG10 is a Heat Stabilized, 50% 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-BG10H-PA6-50-Glass-Filled-Injection-Molded.php

Physical Properties	Metric	English	Comments
Density	1.55 g/cc	0.0560 lb/in ³	ISO 1183
Moisture Absorption	0.600 % @Temperature 23.0 °C	0.600 % @Temperature 73.4 °F	50% RH; ISO 62
Water Absorption at Saturation	4.5 % @Temperature 23.0 °C	4.5 % @Temperature 73.4 °F	ISO 62-1
Linear Mold Shrinkage, Flow	0.0010 - 0.0020 cm/cm	0.0010 - 0.0020 in/in	on Tensile Bar; ISO 294
Linear Mold Shrinkage, Transverse	0.0080 - 0.011 cm/cm	0.0080 - 0.011 in/in	on Tensile Bar; ISO 294

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	122	122	ISO 2039-2
Tensile Strength at Break	224 MPa	32500 psi	5 mm/min; ISO 527
Elongation at Break	3.2 %	3.2 %	5 mm/min; ISO 527
Tensile Modulus	14.0 GPa	2030 ksi	1 mm/min; ISO 527
Flexural Strength	320 MPa	46400 psi	2 mm/min; ISO 178
Flexural Modulus	13.25 GPa	1922 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	14.0 kJ/m ² @Temperature -40.0 °C	6.66 ft-lb/in ² @Temperature -40.0 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	15.0 kJ/m ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	16.0 kJ/m ² @Temperature -20.0 °C	7.61 ft-lb/in ² @Temperature -4.00 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	18.0 kJ/m ² @Temperature 23.0 °C	8.57 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 180/1A

Mechanical Properties	Metric	English	Comments
Izod Impact, Unnotched (ISO)	@Temperature 23.0 °C	@Temperature 73.4 °F	80x10x4; ISO 180/1U
	90.0 kJ/m ²	42.8 ft-lb/in ²	80x10x4; ISO 180/1U
Charpy Impact Unnotched	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
	10.0 J/cm ²	47.6 ft-lb/in ²	Edgew 80x10x4 sp=62; ISO 179/1eU
Charpy Impact, Notched	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
	1.50 J/cm ²	7.14 ft-lb/in ²	Edgew 80x10x4 sp=62; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
	1.80 J/cm ²	8.57 ft-lb/in ²	Edgew 80x10x4 sp=62; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	12.0 µm/m-°C	6.67 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
CTE, linear, Transverse to Flow	83.0 µm/m-°C	46.1 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
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)	212 °C	414 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Af
Vicat Softening Point	215 °C	419 °F	B/120; ISO 306
	218 °C	424 °F	B/50; 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	
UL RTI, Mechanical with Impact	65.0 °C	149 °F	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Thermal Properties	@Thickness 0.750 mm Metric	@Thickness 0.0295 in English	Comments
	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	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	HB	HB	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	25 %	25 %	ISO 4589
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	
Dielectric Strength	20.0 kV/mm	508 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	0.0061 Metric	0.0061 English	Comments
Dissipation Factor	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	IEC 60250
	0.016	0.016	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	350 V	350 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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