

Eurostar Staramide BG4ST43 PA6, Glass Fiber Filled, Impact Modified, Injection Molded

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Glass Filled, Impact Grade

Material Notes:

Staramide BG4ST43 is an Impact Modified and Glass Fiber Reinforced, Polyamide 6, Injection Molding Resin. Information provided by Eurostar.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Eurostar-Staramide-BG4ST43-PA6-Glass-Fiber-Filled-Impact-Modified-Injection-Molded.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 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	6.0 % @Temperature 23.0 °C	6.0 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0070 - 0.0090 cm/cm	0.0070 - 0.0090 in/in	on Tensile Bar; E2P method

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	101 MPa	14600 psi	ISO 2039-1
Tensile Strength at Break	83.0 MPa	12000 psi	5 mm/min; ISO 527
Tensile Strength, Yield	85.0 MPa	12300 psi	5 mm/min; ISO 527
Elongation at Break	4.0 %	4.0 %	5 mm/min; ISO 527
Elongation at Yield	3.2 %	3.2 %	5 mm/min; ISO 527
Tensile Modulus	5.00 GPa	725 ksi	1 mm/min; ISO 527
Flexural Strength	115 MPa	16700 psi	2 mm/min; ISO 178
Flexural Modulus	4.00 GPa	580 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	12.0 kJ/m ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	80x10x4; ISO 180/1A
	12.0 kJ/m ² @Temperature -40.0 °C	5.71 ft-lb/in ² @Temperature -40.0 °F	80x10x4; ISO 180/1A
	14.0 kJ/m ² @Temperature -20.0 °C	6.66 ft-lb/in ² @Temperature -4.00 °F	80x10x4; ISO 180/1A

Mechanical Properties	Metric $/m^2$	English lb/in^2	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	80x10x4; ISO 180/1A
Izod Impact, Unnotched (ISO)	45.0 kJ/m ² @Temperature 23.0 °C	21.4 ft-lb/in ² @Temperature 73.4 °F	80x10x4; ISO 180/1U
	55.0 kJ/m ² @Temperature -30.0 °C	26.2 ft-lb/in ² @Temperature -22.0 °F	80x10x4; ISO 180/1U
Charpy Impact Unnotched	5.00 J/cm ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
	6.00 J/cm ² @Temperature -30.0 °C	28.6 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
Charpy Impact, Notched	1.20 J/cm ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
	1.70 J/cm ² @Temperature 23.0 °C	8.09 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eA
Taber Abrasion, mg/1000 Cycles	31 @Load 1.00 kg	31 @Load 2.20 lb	CS-17; E2P Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 $\mu m/m-^{\circ}C$ @Temperature 23.0 - 60.0 °C	22.2 $\mu in/in-^{\circ}F$ @Temperature 73.4 - 140 °F	ISO 11359-2
CTE, linear, Transverse to Flow	180 $\mu m/m-^{\circ}C$ @Temperature 23.0 - 60.0 °C	100 $\mu in/in-^{\circ}F$ @Temperature 73.4 - 140 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	205 °C	401 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	175 °C	347 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Ae
Vicat Softening Point	185 °C	365 °F	B/50; ISO 306
	186 °C	367 °F	B/120; ISO 306
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	550 V	550 V	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	240 - 260 °C	464 - 500 °F	
Melt Temperature	240 - 260 °C	464 - 500 °F	
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	
Drying Temperature	75.0 - 85.0 °C @Time 14400 - 21600 sec	167 - 185 °F @Time 4.00 - 6.00 hour	
Moisture Content	0.20 %	0.20 %	

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