

Eurostar Staramide AST44 PA66, Impact Modified, Injection Molded

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Impact Grade

Material Notes:

AST44 is a Low Temperature Impact Modified Polyamide 66 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-AST44-PA66-Impact-Modified-Injection-Molded.php

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in ³	ISO 1183
Moisture Absorption	1.50 % @Temperature 23.0 °C	1.50 % @Temperature 73.4 °F	50% RH; ISO 62
Water Absorption at Saturation	5.5 % @Temperature 23.0 °C	5.5 % @Temperature 73.4 °F	ISO 62-1
Linear Mold Shrinkage, Flow	0.019 - 0.021 cm/cm	0.019 - 0.021 in/in	on Tensile Bar; ISO 294

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	112	112	ISO 2039-2
Tensile Strength, Yield	50.0 MPa	7250 psi	50 mm/min; ISO 527
Elongation at Break	>= 100 %	>= 100 %	50 mm/min; ISO 527
Elongation at Yield	4.6 %	4.6 %	50 mm/min; ISO 527
Tensile Modulus	1.90 GPa	276 ksi	1 mm/min; ISO 527
Flexural Yield Strength	72.0 MPa	10400 psi	2 mm/min; ISO 178
Flexural Modulus	1.90 GPa	276 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	55.0 kJ/m ² @Temperature -40.0 °C	26.2 ft-lb/in ² @Temperature -40.0 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	65.0 kJ/m ² @Temperature -20.0 °C	30.9 ft-lb/in ² @Temperature -4.00 °F	Edgew 80x10x4 sp=62; ISO 180/1A
	80.0 kJ/m ² @Temperature 23.0 °C	38.1 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 180/1A
Charpy Impact Unnotched	>= 10.0 J/cm ² @Temperature 23.0 °C	>= 47.6 ft-lb/in ² @Temperature 73.4 °F	Edgew 80x10x4 sp=62; ISO 179/1eU

Mechanical Properties	Metric J/cm^2	English ft-lb/in^2	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80x10x4 sp=62; ISO 179/1eU
Charpy Impact, Notched	6.50 J/cm^2	30.9 ft-lb/in^2	Edgew 80x10x4 sp=62; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.00 J/cm^2	38.1 ft-lb/in^2	Edgew 80x10x4 sp=62; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 $\mu\text{m/m-}^\circ\text{C}$	55.6 $\mu\text{in/in-}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
CTE, linear, Transverse to Flow	120 $\mu\text{m/m-}^\circ\text{C}$	66.7 $\mu\text{in/in-}^\circ\text{F}$	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)	72.0 °C	162 °F	Edgew 120x10x4, sp=100 mm; ISO 75/Af
Vicat Softening Point	190 °C	374 °F	B/120; ISO 306
	192 °C	378 °F	
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	

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	
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	
Flame Spread	15.0 mm/min	0.591 in/min	FMVSS Buring Speed
	@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	2.7	2.7	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	2.9	2.9	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0067	0.0067	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.015	0.015	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	550 V	550 V	IEC 60112

Processing Properties	Metric	English	Comments
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Processing Properties	Metric °C	English °F	Comments
Middle Barrel Temperature	265 - 275 °C	509 - 527 °F	Zone 2
Front Barrel Temperature	265 - 275 °C	509 - 527 °F	Zone 3
Melt Temperature	265 - 275 °C	509 - 527 °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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