

DuPont Performance Polymers Zytel® 79G13HSL NC010 Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 10% Glass Fiber Filled

Material Notes:

Zytel® 79G13HSL is a 13% glass fiber reinforced, heat stabilized, lubricated slightly toughened polyamide 66 for injection molding. It has improved impact resistance. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-79G13HSL-NC010-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.21 g/cc	0.0437 lb/in ³	DAM; ISO 1183
Water Absorption	2.2 %	2.2 %	Equilibrium 50%RH; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	6.5 %	6.5 %	Saturation, immersed; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	74	74	50%RH; ISO 2039/2
	90	90	DAM; ISO 2039/2
Tensile Strength at Break	67.0 MPa	9720 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	118 MPa	17100 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	4.0 %	4.0 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	10 %	10 %	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	3.70 GPa	537 ksi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric SI Units	English Imperial	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	DAM; ISO 527
Izod Impact, Notched (ISO)	4.00 kJ/m ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	50%RH; ISO 180/1A
	6.00 kJ/m ² @Temperature -30.0 °C	2.86 ft-lb/in ² @Temperature -22.0 °F	DAM; ISO 180/1A
	8.00 kJ/m ² @Temperature 23.0 °C	3.81 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 180/1A
	9.00 kJ/m ² @Temperature 23.0 °C	4.28 ft-lb/in ² @Temperature 73.4 °F	50%RH; ISO 180/1A
Charpy Impact Unnotched	5.40 J/cm ² @Temperature -30.0 °C	25.7 ft-lb/in ² @Temperature -22.0 °F	50%RH; ISO 179/1eU
	5.90 J/cm ² @Temperature -30.0 °C	28.1 ft-lb/in ² @Temperature -22.0 °F	DAM; ISO 179/1eU
	5.90 J/cm ² @Temperature 23.0 °C	28.1 ft-lb/in ² @Temperature 73.4 °F	50%RH; ISO 179/1eU
	6.70 J/cm ² @Temperature 23.0 °C	31.9 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 179/1eU
Charpy Impact, Notched	0.600 J/cm ² @Temperature -30.0 °C	2.86 ft-lb/in ² @Temperature -22.0 °F	50%RH; ISO 179/1eA
	0.600 J/cm ² @Temperature -30.0 °C	2.86 ft-lb/in ² @Temperature -22.0 °F	DAM; ISO 179/1eA
	0.800 J/cm ² @Temperature 23.0 °C	3.81 ft-lb/in ² @Temperature 73.4 °F	DAM; ISO 179/1eA
	1.40 J/cm ² @Temperature 23.0 °C	6.66 ft-lb/in ² @Temperature 73.4 °F	50%RH; ISO 179/1eA
Tensile Creep Modulus, 1 hour	4030 MPa @Temperature 23.0 °C	585000 psi @Temperature 73.4 °F	50%RH; ISO 899
Tensile Creep Modulus, 1000 hours	3180 MPa @Temperature 23.0 °C	461000 psi @Temperature 73.4 °F	50%RH; ISO 899

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	278 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	130 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	72.2 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	
Melting Point	263 $^{\circ}\text{C}$	505 $^{\circ}\text{F}$	10 $^{\circ}\text{C}/\text{min}$; DAM; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	260 $^{\circ}\text{C}$	500 $^{\circ}\text{F}$	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	242 $^{\circ}\text{C}$	468 $^{\circ}\text{F}$	DAM; ISO 75-1/-2
UL RTI, Electrical	105 $^{\circ}\text{C}$	221 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	120 $^{\circ}\text{C}$	248 $^{\circ}\text{F}$	
UL RTI, Mechanical with Impact	@Thickness 3.00 mm	@Thickness 0.118 in	DAM; UL 746B
	120 $^{\circ}\text{C}$	248 $^{\circ}\text{F}$	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	DAM; UL 746B
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	105 $^{\circ}\text{C}$	221 $^{\circ}\text{F}$	
UL RTI, Mechanical with Impact	@Thickness 3.00 mm	@Thickness 0.118 in	DAM; UL 746B
	105 $^{\circ}\text{C}$	221 $^{\circ}\text{F}$	
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UL RTI, Mechanical with Impact	@Thickness 3.00 mm	@Thickness 0.118 in	DAM; UL 746B
	120 $^{\circ}\text{C}$	248 $^{\circ}\text{F}$	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	HB	HB	DAM; IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
	HB	HB	

Thermal Properties	Metric	English	DAM; IEC 60695-11-10 Comments
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	
	HB @Thickness 0.810 mm	HB @Thickness 0.0319 in	DAM; IEC 60695-11-10
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	DAM; UL94
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	DAM; UL94
	HB @Thickness 0.810 mm	HB @Thickness 0.0319 in	DAM; UL94

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	250 V @Temperature 23.0 °C	250 V @Temperature 73.4 °F	DAM; UL 746A

Processing Properties	Metric	English	Comments
Melt Temperature	295 °C	563 °F	DAM; Optimum
	285 - 305 °C	545 - 581 °F	DAM
Drying Temperature	80.0 °C	176 °F	DAM
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	DAM
Moisture Content	<= 0.20 %	<= 0.20 %	DAM

Descriptive Properties	Value	Comments
Forms	Pellets	DAM
Generic	Nylon 66	DAM
Material Status	Preliminary Data	DAM
Part Marking Code	>PA66-IGF13<	ISO 11469; DAM
Processing Method	Injection Molding	DAM
Product Category	Glass Reinforced Resins	DAM
	Toughened Resins	DAM
Resin Identification	PA66-IGF13	ISO 1043; DAM

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