

DuPont Performance Polymers Zytel® FG70G50HSLA BK309 Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66

Material Notes:

50% Glass Reinforced Heat Stabilized Polyamide 66 with Developed for Food Contact Applications Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-FG70G50HSLA-BK309-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.40 g/cc	0.0506 lb/in ³	
	1.57 g/cc	0.0567 lb/in ³	DAM; ISO 1183
Water Absorption	4.2 %	4.2 %	DAM; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	1.20 %	1.20 %	DAM; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity Test	100 cm ³ /g	100 cm ³ /g	DAM; ISO 307 1157 1628
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	DAM; ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	190 MPa	27600 psi	50%RH; ISO 527-1/-2
	250 MPa	36300 psi	DAM; ISO 527-1/-2
Elongation at Break	2.3 %	2.3 %	DAM; ISO 527-1/-2
	3.2 %	3.2 %	50%RH; ISO 527-1/-2
Tensile Modulus	13.0 GPa	1890 ksi	50%RH; ISO 527-1/-2
	17.0 GPa	2470 ksi	DAM; ISO 527-1/-2
Charpy Impact Unnotched	10.0 J/cm ²	47.6 ft-lb/in ²	DAM; ISO 179/1eU
	11.0 J/cm ²	52.3 ft-lb/in ²	50%RH; ISO 179/1eU
	9.00 J/cm ² @Temperature -30.0 °C	42.8 ft-lb/in ² @Temperature -22.0 °F	DAM; ISO 179/1eU

Mechanical Properties	9.00 J/cm ² Metric	42.8 ft-lb/in ² English	Comments 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.80 J/cm ²	8.57 ft-lb/in ²	DAM; ISO 179/1eA
	2.00 J/cm ²	9.52 ft-lb/in ²	50%RH; ISO 179/1eA
	1.40 J/cm ²	6.66 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.50 J/cm ²	7.14 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1 hour	10000 MPa	1.45e+6 psi	50%RH; ISO 899-1
	@Time 3600 sec	@Time 1.00 hour	
Tensile Creep Modulus, 1000 hours	8000 MPa	1.16e+6 psi	50%RH; ISO 899-1
	@Time 3.60e+6 sec	@Time 1000 hour	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	15.0 µm/m-°C	8.33 µin/in-°F	DAM; ISO 11359-1/-2
CTE, linear, Transverse to Flow	75.0 µm/m-°C	41.7 µin/in-°F	DAM; ISO 11359-1/-2
Specific Heat Capacity	1.87 J/g-°C	0.447 BTU/lb-°F	
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ft ² -°F	of melt
	0.460 W/m-K	3.19 BTU-in/hr-ft ² -°F	of solid
Melting Point	262 °C	504 °F	DAM; 10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	262 °C	504 °F	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	260 °C	500 °F	DAM; ISO 75-1/-2
Vicat Softening Point	255 °C	491 °F	DAM; 50°C/h 50N; ISO 306
Glass Transition Temp, Tg	80.0 °C	176 °F	DAM; 10°C/min; ISO 11357-1/-2
Flammability, UL94	HB	HB	DAM; IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	DAM; IEC 60695-11-10
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Oxygen Index	24 %	24 %	DAM; ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	DAM; IEC 60093
Surface Resistance	4.00e+14 ohm	4.00e+14 ohm	50%RH; IEC 60093

Descriptive Properties	Value	Comments
Additives	Lubricants	
	Release agent	
Delivery Form	Pellets	
Emission of organic compounds	6.5 µgC/g	VDA 277
Odour	class 3	VDA 270
Processing	Injection Moulding	
Regional Availability	Asia Pacific	
	Europe	
	Global	
	Near East/Africa	
	North America	
	South and Central America	
Special Characteristics	Heat stabilised or stable to heat	
UL recognition	UL	DAM

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