

DuPont Performance Polymers Zytel® FR70G25V0 NC010 Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Glass Fiber Filled, Flame Retardant

Material Notes:

Zytel® FR70G25V0 NC010 is a 25% glass fiber reinforced, heat stabilized, flame retardant polyamide 66 resin for injection molding. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-FR70G25V0-NC010-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.54 g/cc	1.54 g/cc	DAM; ASTM D792
Density	1.49 g/cc	0.0538 lb/in ³	DAM; ISO 1183
Filler Content	25 %	25 %	DAM
Water Absorption	0.90 %	0.90 %	Equilibrium 50%RH; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	3.4 %	3.4 %	Saturation, immersed; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	Flow; DAM
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	0.0035 cm/cm	0.0035 in/in	Flow; DAM
	@Thickness 3.20 mm	@Thickness 0.126 in	
	0.011 cm/cm	0.011 in/in	Transverse; DAM
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	0.011 cm/cm	0.011 in/in	Transverse; DAM
	@Thickness 3.20 mm	@Thickness 0.126 in	
Linear Mold Shrinkage, Flow	0.0023 cm/cm	0.0023 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	110 MPa	16000 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
	123 MPa	18000 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength	138 MPa	20000 psi	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.0 %	2.0 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.3 %	2.3 %	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.6 %	2.6 %	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	7.50 GPa	1090 ksi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9.00 GPa	1310 ksi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	190 MPa	27600 psi	DAM; ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	8.00 GPa	1160 ksi	DAM; ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	DAM; ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	6.00 kJ/m ²	2.86 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.50 kJ/m ²	3.09 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	4.30 J/cm ²	20.5 ft-lb/in ²	DAM; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.50 J/cm ²	21.4 ft-lb/in ²	DAM; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.00 J/cm ²	4.76 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	DAM: ISO 179/1eA Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	DAM; ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	500 µm/m-°C	278 µin/in-°F	50%RH; ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	500 µm/m-°C	278 µin/in-°F	50%RH; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	500 µm/m-°C	278 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	83.0 µm/m-°C	46.1 µin/in-°F	DAM; ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	83.0 µm/m-°C	46.1 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Melting Point	260 °C	500 °F	10°C/min; DAM; ISO 11357-1/-3
	263 °C	505 °F	
	263 °C	505 °F	DAM; ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	243 °C	469 °F	DAM; ISO 75-1/-2
	243 °C	469 °F	
	243 °C	469 °F	DAM; ASTM D648
UL RTI, Electrical	65.0 °C	149 °F	DAM; UL 746B
	@Thickness 0.500 mm	@Thickness 0.0197 in	
	120 °C	248 °F	DAM; UL 746B
	@Thickness 0.830 mm	@Thickness 0.0327 in	
	130 °C	266 °F	DAM; UL 746B
@Thickness 3.00 mm	@Thickness 0.118 in		
	130 °C	266 °F	DAM; UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	130 °C	266 °F	

Thermal Properties	Metric @Thickness 1.50 mm	English @Thickness 0.0591 in	DAM; UL 746B Comments
UL RTI, Mechanical with Impact	65.0 °C	149 °F	DAM; UL 746B
	@Thickness 0.500 mm	@Thickness 0.0197 in	
	120 °C	248 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 °C	248 °F	
UL RTI, Mechanical without Impact	@Thickness 3.00 mm	@Thickness 0.118 in	DAM; UL 746B
	120 °C	248 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 °C	248 °F	
	@Thickness 0.830 mm	@Thickness 0.0327 in	
UL RTI, Mechanical without Impact	65.0 °C	149 °F	DAM; UL 746B
	@Thickness 0.500 mm	@Thickness 0.0197 in	
	130 °C	266 °F	
UL RTI, Mechanical without Impact	@Thickness 0.830 mm	@Thickness 0.0327 in	DAM; UL 746B
	130 °C	266 °F	
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	DAM; ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	DAM; ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dielectric Constant	3.4	3.4	DAM; ASTM D150
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
Dielectric Constant	3.5	3.5	DAM; ASTM D150
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
Dielectric Strength	15.6 kV/mm	396 kV/in	DAM; Short Time; ASTM D149
	@Thickness 3.20 mm, Temperature 23.0 °C	@Thickness 0.126 in, Temperature 73.4 °F	

Electrical Properties	26.0 kV/mm Metric	660 kV/in English	Comments 50%RH, IEC 60243-1
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
	37.0 kV/mm	940 kV/in	DAM; IEC 60243-1
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	
Dissipation Factor	0.010	0.010	DAM; ASTM D150
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
	0.010	0.010	DAM; ASTM D150
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
Comparative Tracking Index	250 - 400 V	250 - 400 V	DAM; IEC 60112
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	250 - 400 V	250 - 400 V	50%RH; IEC 60112
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	250 - 400 V	250 - 400 V	DAM; UL 746A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	250 - 400 V	250 - 400 V	DAM; UL 746A
	@Thickness 3.00 mm, Temperature 23.0 °C	@Thickness 0.118 in, Temperature 73.4 °F	

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