

DuPont Performance Polymers Zytel® FG77G33L NC010 Nylon 612 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 612 , Nylon 612, Glass Fiber Filler

Material Notes:

Zytel® FG77G33L NC010 is a 33% glass fiber reinforced polyamide 612 resin for injection molding. It has been developed for consideration for applications such as parts in the food industry. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-FG77G33L-NC010-Nylon-612-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.32 g/cc	0.0477 lb/in ³	DAM; ISO 1183
Water Absorption	0.30 %	0.30 %	Immersion 24h; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.70 %	0.70 %	
	@Temperature 23.0 °C	@Temperature 73.4 °F	Equilibrium 50%RH; DAM; ISO 62, Similar to
	1.8 %	1.8 %	Saturation, immersed; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	140 MPa	20300 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	168 MPa	24400 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	3.2 %	3.2 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	3.2 %	3.2 %	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	7.90 GPa	1150 ksi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric ¹ Pa	English ¹	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	DAM; ISO 927
Flexural Modulus	7.00 GPa	1020 ksi	50%RH; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	8.20 GPa	1190 ksi	DAM; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	50%RH; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	10.0 kJ/m ²	4.76 ft-lb/in ²	50%RH; ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	11.0 kJ/m ²	5.23 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	11.0 kJ/m ²	5.23 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	12.0 kJ/m ²	5.71 ft-lb/in ²	50%RH; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	13.0 kJ/m ²	6.19 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	45.0 kJ/m ²	21.4 ft-lb/in ²	50%RH; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	60.0 kJ/m ²	28.6 ft-lb/in ²	DAM; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	60.0 kJ/m ²	28.6 ft-lb/in ²	50%RH; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	70.0 kJ/m ²	33.3 ft-lb/in ²	DAM; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	6.00 J/cm ²	28.6 ft-lb/in ²	DAM; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.50 J/cm ²	30.9 ft-lb/in ²	50%RH; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.00 J/cm ²	38.1 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	DAM; ISO 179/1eU Comments
	9.00 J/cm ² @ Temperature 23.0 °C	42.8 ft-lb/in ² @ Temperature 73.4 °F	50%RH; ISO 179/1eU
Charpy Impact, Notched	1.00 J/cm ² @ Temperature -30.0 °C	4.76 ft-lb/in ² @ Temperature -22.0 °F	50%RH; ISO 179/1eA
	1.00 J/cm ² @ Temperature -40.0 °C	4.76 ft-lb/in ² @ Temperature -40.0 °F	50%RH; ISO 179/1eA
	1.10 J/cm ² @ Temperature -30.0 °C	5.23 ft-lb/in ² @ Temperature -22.0 °F	DAM; ISO 179/1eA
	1.20 J/cm ² @ Temperature 23.0 °C	5.71 ft-lb/in ² @ Temperature 73.4 °F	50%RH; ISO 179/1eA
	1.20 J/cm ² @ Temperature -40.0 °C	5.71 ft-lb/in ² @ Temperature -40.0 °F	DAM; ISO 179/1eA
	1.30 J/cm ² @ Temperature 23.0 °C	6.19 ft-lb/in ² @ Temperature 73.4 °F	DAM; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C @ Temperature -40.0 - 23.0 °C	278 µin/in-°F @ Temperature -40.0 - 73.4 °F	DAM; ISO 11359-1/-2
	500 µm/m-°C @ Temperature 23.0 - 55.0 °C	278 µin/in-°F @ Temperature 73.4 - 131 °F	DAM; ISO 11359-1/-2
	500 µm/m-°C @ Temperature 55.0 - 160 °C	278 µin/in-°F @ Temperature 131 - 320 °F	DAM; ISO 11359-1/-2
CTE, linear, Transverse to Flow	83.0 µm/m-°C @ Temperature -40.0 - 23.0 °C	46.1 µin/in-°F @ Temperature -40.0 - 73.4 °F	DAM; ISO 11359-1/-2
	113 µm/m-°C @ Temperature 23.0 - 55.0 °C	62.8 µin/in-°F @ Temperature 73.4 - 131 °F	DAM; ISO 11359-1/-2
	158 µm/m-°C @ Temperature 55.0 -	87.8 µin/in-°F @ Temperature 131 -	DAM; ISO 11359-1/-2

Thermal Properties	160 °C Metric	320 °F English	Comments
Melting Point	218 °C	424 °F	10°C/min; DAM; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	216 °C	421 °F	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	DAM; ISO 75-1/-2
Glass Transition Temp, Tg	70.0 °C	158 °F	10°C/min; DAM; ISO 11357-1/-2

Processing Properties	Metric	English	Comments
Melt Temperature	290 °C	554 °F	DAM; Optimum
	280 - 300 °C	536 - 572 °F	DAM
Mold Temperature	70.0 - 120 °C	158 - 248 °F	DAM
	100 °C	212 °F	DAM; optimum
Drying Temperature	80.0 °C	176 °F	DAM
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	DAM
Moisture Content	<= 0.15 %	<= 0.15 %	DAM

Descriptive Properties	Value	Comments
Forms	Pellets	DAM
Generic	PA612	DAM
Material Status	Current	DAM
Part Marking Code	>PA612-GF33<	ISO 11469; DAM
Processing Method	Injection Molding	DAM
Product Category	Food Contact Resins	DAM
	Glass Reinforced Resins	DAM
Region Available - Global	Yes	DAM
Resin Identification	PA612-GF33	ISO 1043; DAM
RoHS Compliance	Contact Manufacturer	DAM
Uses	Food Applications, Non-specific	DAM

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