

DuPont Performance Polymers Zytel® 77G33L BK031 Nylon 612 (Unverified Data**)

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

Material Notes:

Zytel® 77G33L BK031 is a 33% glass fiber reinforced, black polyamide 612 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-77G33L-BK031-Nylon-612-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.32 g/cc	1.32 g/cc	DAM; ASTM D792
Density	1.32 g/cc	0.0477 lb/in ³	DAM; ISO 1183
Filler Content	33 %	33 %	DAM
Linear Mold Shrinkage	0.0010 cm/cm	0.0010 in/in	Flow; DAM
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	0.0020 cm/cm	0.0020 in/in	Flow; DAM
	@Thickness 3.20 mm	@Thickness 0.126 in	
0.0040 cm/cm	0.0040 in/in	Flow; DAM	
@Thickness 6.40 mm	@Thickness 0.252 in		
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	Transverse; DAM
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	0.010 cm/cm	0.010 in/in	
Linear Mold Shrinkage, Transverse	@Thickness 3.20 mm	@Thickness 0.126 in	Transverse; DAM
	0.011 cm/cm	0.011 in/in	
Linear Mold Shrinkage, Transverse	@Thickness 6.40 mm	@Thickness 0.252 in	Transverse; DAM
	0.0030 cm/cm	0.0030 in/in	
Linear Mold Shrinkage, Flow	@Thickness 2.00 mm	@Thickness 0.0787 in	DAM; ISO 294-4
	0.0090 cm/cm	0.0090 in/in	
Linear Mold Shrinkage, Transverse	@Thickness 2.00 mm	@Thickness 0.0787 in	DAM; ISO 294-4

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	

Mechanical Properties	Metric 100 MPa	English 7400 psi	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	DAM; ISO 527
Tensile Strength	165 MPa	23900 psi	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	3.0 %	3.0 %	DAM; ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	3.0 %	3.0 %	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	
	9.50 GPa	1380 ksi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	245 MPa	35500 psi	DAM; ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	8.20 GPa	1190 ksi	DAM; ASTM D790
	@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	1.06 J/cm	1.99 ft-lb/in	DAM; ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched	10.65 J/cm	19.95 ft-lb/in	DAM; ASTM D4812
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	11.0 kJ/m ²	5.23 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	13.0 kJ/m ²	6.19 ft-lb/in ²	DAM; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.20 J/cm ²	5.71 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	1.30 J/cm ²	6.19 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 -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	
CTE, linear, Parallel to Flow	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	DAM; ASTM E 831
	500 µm/m-°C	278 µin/in-°F	
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	DAM; ASTM E 831
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	500 µm/m-°C	278 µin/in-°F	
CTE, linear, Parallel to Flow	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	DAM; ISO 11359-1/-2
	500 µm/m-°C	278 µin/in-°F	
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
CTE, linear, Transverse to Flow	83.0 µm/m-°C	46.1 µin/in-°F	DAM; ASTM E 831
	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	
	83.0 µm/m-°C	46.1 µin/in-°F	
CTE, linear, Transverse to Flow	@Temperature -40.0 - 23.0 °C	@Temperature -40.0 - 73.4 °F	DAM; ISO 11359-1/-2
	113 µm/m-°C	62.8 µin/in-°F	
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
CTE, linear, Transverse to Flow	113 µm/m-°C	62.8 µin/in-°F	DAM; ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	113 µm/m-°C	62.8 µin/in-°F	
CTE, linear, Transverse to Flow	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	DAM; ISO 11359-1/-2
	158 µm/m-°C	87.8 µin/in-°F	
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
CTE, linear, Transverse to Flow	158 µm/m-°C	87.8 µin/in-°F	DAM; ASTM E 831
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	
	158 µm/m-°C	87.8 µin/in-°F	
CTE, linear, Transverse to Flow	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	DAM; ISO 11359-1/-2
	158 µm/m-°C	87.8 µin/in-°F	
	@Temperature 55.0 - 160 °C	@Temperature 131 - 320 °F	

Thermal Properties	@Temperature 55.0 - Metric 180 °C	@Temperature 131 - English 320 °F	Comments
Melting Point	215 °C	419 °F	DAM; ASTM D3418
	218 °C	424 °F	10°C/min; DAM; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	205 °C	401 °F	DAM; ASTM D648
	190 °C	374 °F	DAM; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	DAM; ISO 75-1/-2
	105 °C	221 °F	DAM; UL 746B
UL RTI, Electrical	@Thickness 0.710 mm	@Thickness 0.0280 in	DAM; UL 746B
	120 °C	248 °F	DAM; UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	DAM; UL 746B
UL RTI, Mechanical without Impact	120 °C	248 °F	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	DAM; UL 746B
Flammability, UL94	120 °C	248 °F	DAM; UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	DAM; UL 746B
Flammability, UL94	HB	HB	DAM; IEC 60695-11-10
	@Thickness 0.710 mm	@Thickness 0.0280 in	DAM; IEC 60695-11-10
Flammability, UL94	HB	HB	DAM; IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	DAM; IEC 60695-11-10
Flammability, UL94	HB	HB	DAM; IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	DAM; IEC 60695-11-10
Flammability, UL94	HB	HB	DAM; UL94
	@Thickness 3.00 mm	@Thickness 0.118 in	DAM; UL94
Flammability, UL94	HB	HB	DAM; UL94
	@Thickness 0.710 mm	@Thickness 0.0280 in	DAM; UL94
Flammability, UL94	HB	HB	DAM; UL94
	@Thickness 1.50 mm	@Thickness 0.0591 in	DAM; UL94
Glow Wire Test	675 °C	1250 °F	DAM; IEC 60695-2-12

Thermal Properties	@Thickness 1.50 mm Metric	@Thickness 0.0591 in English	Comments
	675 °C	1250 °F	DAM; IEC 60695-2-12
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	700 °C	1290 °F	DAM; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
	700 °C	1290 °F	DAM; Ignition; IEC 60695-2-13
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	700 °C	1290 °F	DAM; Ignition; IEC 60695-2-13
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	725 °C	1340 °F	DAM; Ignition; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	600 V	600 V	DAM; UL 746A
	@Temperature 23.0 °C	@Temperature 73.4 °F	

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

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China