DuPont Performance Polymers Zytel® 73G30HSL BK416 Nylon 6 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Glass Fiber Filled

Material Notes:

Zytel® 73G30HSL BK416 is a 30% glass fiber reinforced, heat stabilized, lubricated, black polyamide 6 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-73G30HSL-BK416-Nylon-6-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in³	DAM; ISO 1183
Filler Content	30 %	30 %	DAM
Linear Mold Shrinkage	0.0010 cm/cm @Thickness 1.60 mm	0.0010 in/in @Thickness 0.0630 in	Flow; DAM
	0.0020 cm/cm @Thickness 3.20 mm	0.0020 in/in @Thickness 0.126 in	Flow; DAM
	0.0030 cm/cm @Thickness 6.40 mm	0.0030 in/in @Thickness 0.252 in	Flow; DAM
	0.0070 cm/cm @Thickness 1.60 mm	0.0070 in/in @Thickness 0.0630 in	Transverse; DAM
	0.0080 cm/cm @Thickness 3.20 mm	0.0080 in/in @Thickness 0.126 in	Transverse; DAM
	0.0080 cm/cm @Thickness 6.40 mm	0.0080 in/in @Thickness 0.252 in	Transverse; DAM
Linear Mold Shrinkage, Flow	0.0020 cm/cm @Thickness 2.00 mm	0.0020 in/in @Thickness 0.0787 in	DAM; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0060 cm/cm @Thickness 2.00 mm	0.0060 in/in @Thickness 0.0787 in	DAM; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	115 MPa @Temperature 23.0 °C	16700 psi @Temperature 73.4 °F	50%RH; ISO 527
	190 MPa	27600 psi	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	DAM; ISO 527
Elongation at Break	3.5 % @Temperature 23.0 °C	3.5 % @Temperature 73.4 °F	DAM; ISO 527
	6.0 % @Temperature 23.0 °C	6.0 % @Temperature 73.4 °F	50%RH; ISO 527
Tensile Modulus	5.80 GPa @Temperature 23.0 °C	841 ksi @Temperature 73.4 °F	50%RH; ISO 527
	9.80 GPa @Temperature 23.0 °C	1420 ksi @Temperature 73.4 °F	DAM; ISO 527
Flexural Modulus	8.20 GPa @Temperature 23.0 °C	1190 ksi @Temperature 73.4 °F	DAM; ISO 178
Izod Impact, Notched (ISO)	11.0 kJ/m² @Temperature -40.0 °C	5.23 ft-lb/in² @Temperature -40.0 °F	DAM; ISO 180/1A
	15.0 kJ/m² @Temperature 23.0 °C	7.14 ft-lb/in² @Temperature 73.4 °F	DAM; ISO 180/1A
	20.0 kJ/m² @Temperature 23.0 °C	9.52 ft-lb/in² @Temperature 73.4 °F	50%RH; ISO 180/1A
Charpy Impact Unnotched	9.50 J/cm² @Temperature 23.0 °C	45.2 ft-lb/in² @Temperature 73.4 °F	50%RH; ISO 179/1eU
	9.50 J/cm² @Temperature 23.0 °C	45.2 ft-lb/in² @Temperature 73.4 °F	DAM; ISO 179/1eU
Charpy Impact, Notched	1.60 J/cm² @Temperature 23.0 °C	7.61 ft-lb/in² @Temperature 73.4 °F	DAM; ISO 179/1eA
	2.30 J/cm² @Temperature 23.0 °C	10.9 ft-lb/in² @Temperature 73.4 °F	50%RH; 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 -	278 µin/in-°F @Temperature 73.4 -	DAM; ISO 11359-1/-2

Thermal Properties	Metric	English	Comments
	55.0 °C 500 µm/m-°C @Temperature 55.0 - 160 °C	131 °F 278 µin/in-°F @Temperature 131 - 320 °F	DAM; ISO 11359-1/-2
CTE, linear, Transverse to Flow	76.0 µm/m-°C @Temperature -40.0 - 23.0 °C	42.2 µin/in-°F @Temperature -40.0 - 73.4 °F	DAM; ISO 11359-1/-2
	99.0 µm/m-°C @Temperature 23.0 - 55.0 °C	55.0 µin/in-°F @Temperature 73.4 - 131 °F	DAM; ISO 11359-1/-2
	125 µm/m-°C @Temperature 55.0 - 160 °C	69.4 µin/in-°F @Temperature 131 - 320 °F	DAM; ISO 11359-1/-2
Melting Point	221 °C	430 °F	10°C/min; DAM; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	220 °C	428 °F	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	204 °C	399 °F	DAM; ISO 75-1/-2
UL RTI, Electrical	65.0 °C @Thickness 0.800 mm	149 °F @Thickness 0.0315 in	DAM; UL 746B
	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	DAM; UL 746B
	65.0 °C @Thickness 3.00 mm	149 °F @Thickness 0.118 in	DAM; UL 746B
UL RTI, Mechanical with Impact	65.0 °C @Thickness 3.00 mm	149 °F @Thickness 0.118 in	DAM; UL 746B
	65.0 °C @Thickness 0.800 mm	149 °F @Thickness 0.0315 in	DAM; UL 746B
	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	DAM; UL 746B
UL RTI, Mechanical without Impact	65.0 °C @Thickness 3.00 mm	149 °F @Thickness 0.118 in	DAM; UL 746B
	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	DAM; UL 746B

Thermal Properties	Metric	English	Comments
	65.0 °C @Thickness 0.800 mm	149 °F @Thickness 0.0315 in	DAM; UL 746B
Flammability, UL94	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	DAM; IEC 60695-11-10
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	DAM; IEC 60695-11-10
	HB @Thickness 0.800 mm	HB @Thickness 0.0315 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 0.800 mm	HB @Thickness 0.0315 in	DAM; UL94

Processing Properties	Metric	English	Comments
Melt Temperature	270 °C	518 °F	DAM; Optimum
	260 - 280 °C	500 - 536 °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	<= 0.20 %	<= 0.20 %	DAM

Descriptive Properties	Value	Comments
Additive	Heat Stabilizer	DAM
	Lubricant	DAM
Appearance	Black Color	DAM
Drying Recommended	Yes, if moisture content of resin exceeds recommended level	DAM
Features	Weather Resistance, Good	DAM
Filler		DAM

Descriptive Properties	Value	Comments
	Glass fiber reinforcement	
Forms	Pellets	DAM
Generic	Nylon 6	DAM
Heat Stabilized	Yes	DAM
Material Status	Current	DAM
Part Marking Code	>PA6-GF30<	ISO 11469; DAM
Polymer Family	Polyamide	DAM
Polymer Type	PA6	DAM
Processing Method	Blow Molding	DAM
	Injection Molding	DAM
Product Category	Glass Reinforced Resins	DAM
Region Available - Global	Yes	DAM
Resin Identification	PA6-GF30	ISO 1043; DAM
RoHS Compliance	Contact Manufacturer	DAM
Ultrasonic Weldable	Yes	DAM
Uses	Appliance Components	DAM
	Automotive Applications	DAM
	Parts, Engineering	DAM
	Parts, Machine/Mechanical	DAM

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