

## DuPont Performance Polymers Zytel® PLUS PLS95G35DH1 BK031 Nylon

Category : Polymer , Thermoplastic , Nylon

### Material Notes:

Zytel® PLS95G35DH1 BK031 is a high flow 35% glass reinforced PA using SHIELD Technology, only from DuPont, combining excellent surface appearance, excellent welding and fatigue retention, exceptional resistance in hot air & hot engine oil. Information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Zytel-PLUS-PLS95G35DH1-BK031-Nylon.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-PLUS-PLS95G35DH1-BK031-Nylon.php)

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in <sup>3</sup>	DAM; ISO 1183
Filler Content	35 %	35 %	DAM
Water Absorption	1.8 %	1.8 %	Equilibrium 50%RH; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	6.0 %	6.0 %	Saturation, immersed; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0075 cm/cm	0.0075 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	135 MPa	19600 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	210 MPa	30500 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	3.5 %	3.5 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	7.0 %	7.0 %	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	
	11.0 GPa	1600 ksi	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	DAM; ISO 527 Comments
Flexural Strength	316 MPa @ Temperature 23.0 °C	45800 psi @ Temperature 73.4 °F	DAM; ISO 178
Flexural Modulus	9.80 GPa @ Temperature 23.0 °C	1420 ksi @ Temperature 73.4 °F	DAM; ISO 178
Charpy Impact Unnotched	6.80 J/cm <sup>2</sup> @ Temperature -30.0 °C	32.4 ft-lb/in <sup>2</sup> @ Temperature -22.0 °F	DAM; ISO 179/1eU
	7.00 J/cm <sup>2</sup> @ Temperature -30.0 °C	33.3 ft-lb/in <sup>2</sup> @ Temperature -22.0 °F	50%RH; ISO 179/1eU
	8.70 J/cm <sup>2</sup> @ Temperature 23.0 °C	41.4 ft-lb/in <sup>2</sup> @ Temperature 73.4 °F	DAM; ISO 179/1eU
Charpy Impact, Notched	10.0 J/cm <sup>2</sup> @ Temperature 23.0 °C	47.6 ft-lb/in <sup>2</sup> @ Temperature 73.4 °F	50%RH; ISO 179/1eU
	1.30 J/cm <sup>2</sup> @ Temperature -30.0 °C	6.19 ft-lb/in <sup>2</sup> @ Temperature -22.0 °F	DAM; ISO 179/1eA
	1.40 J/cm <sup>2</sup> @ Temperature 23.0 °C	6.66 ft-lb/in <sup>2</sup> @ Temperature 73.4 °F	DAM; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	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	95.0 µm/m-°C	52.8 µin/in-°F	DAM; ISO 11359-1/-2
	@ Temperature 23.0 - 55.0 °C	@ Temperature 73.4 - 131 °F	
Melting Point	266 °C	511 °F	10°C/min; DAM; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	263 °C	505 °F	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	250 °C	482 °F	DAM; ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	6.70e+14 ohm-cm	6.70e+14 ohm-cm	50%RH; IEC 60093
	@ Temperature 23.0 °C	@ Temperature 73.4 °F	

Electrical Properties	Metric	English	Comments
	4.50E+14 ohm-cm	4.50E+14 ohm-cm	50%RH; ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	3.00E+16 ohm-cm	3.00E+16 ohm-cm	DAM; ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	3.00E+16 ohm-cm	3.00E+16 ohm-cm	DAM; IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Surface Resistance	4.50E+14 ohm	4.50E+14 ohm	50%RH; IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.00E+14 ohm	5.00E+14 ohm	50%RH; ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.00E+15 ohm	1.00E+15 ohm	DAM; ASTM D257
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.00E+15 ohm	1.00E+15 ohm	DAM; IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Comparative Tracking Index	>= 600 V	>= 600 V	DAM; IEC 60112
	@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
	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
Appearance	Black Color	DAM
Drying Recommended	Yes, if moisture content of resin exceeds recommended level	DAM
Features	Copolymer	DAM

Descriptive Properties	Flow Good Value	DAM Comments
	Thermal Stability, Good	DAM
Filler	Glass Reinforced	DAM
Forms	Pellets	DAM
Generic	Nylon 6	DAM
Material Status	Preliminary Data	DAM
Part Marking Code	>PA-GF35<	ISO 11469; DAM
Polymer Family	Polyamide	DAM
Polymer Type	PA	DAM
Processing Method	Injection Molding	DAM
Product Category	Glass Reinforced Resins	DAM
	SHIELD Technology Resins	DAM
Region Available - Global	Yes	DAM
Resin Identification	PA-GF35	ISO 1043; DAM
RoHS Compliance	Contact Manufacturer	DAM
Ultrasonic Weldable	Yes	DAM
Uses	Automotive Applications	DAM
	Automotive Under the Hood	DAM
	High Temperature Applications	DAM

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