

DuPont Performance Polymers Zytel® 70G30HSLR NC010 Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Glass Fiber Filled

Material Notes:

Zytel® 70G30HSLR NC010 is a 30% glass fiber reinforced, heat stabilized, hydrolysis resistant 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-70G30HSLR-NC010-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.37 g/cc	0.0495 lb/in ³	DAM; ISO 1183
Filler Content	30 %	30 %	DAM
Water Absorption	1.9 %	1.9 %	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	
Viscosity	58000 cP	58000 cP	DAM; ISO 11443
	@Shear Rate 7000 1/s, Temperature 305 °C	@Shear Rate 7000 1/s, Temperature 581 °F	
	69000 cP	69000 cP	DAM; ISO 11443
	@Shear Rate 5000 1/s, Temperature 305 °C	@Shear Rate 5000 1/s, Temperature 581 °F	
	73000 cP	73000 cP	DAM; ISO 11443
	@Shear Rate 7000 1/s, Temperature 295 °C	@Shear Rate 7000 1/s, Temperature 563 °F	
	86000 cP	86000 cP	DAM; ISO 11443
	@Shear Rate 5000 1/s, Temperature 295 °C	@Shear Rate 5000 1/s, Temperature 563 °F	
	107000 cP	107000 cP	DAM; ISO 11443
	@Shear Rate 2000 1/s, Temperature 305 °C	@Shear Rate 2000 1/s, Temperature 581 °F	
	116000 cP	116000 cP	DAM; ISO 11443
	@Shear Rate 7000 1/s, Temperature 275 °C	@Shear Rate 7000 1/s, Temperature 527 °F	
	134000 cP	134000 cP	DAM; ISO 11443
	@Shear Rate 2000 1/s,	@Shear Rate 2000 1/s,	

Physical Properties	Temperature 295 °C Metric	Temperature 563 °F English	Comments
	137000 cP @Shear Rate 5000 1/s, Temperature 275 °C	137000 cP @Shear Rate 5000 1/s, Temperature 527 °F	DAM; ISO 11443
	147000 cP @Shear Rate 1000 1/s, Temperature 305 °C	147000 cP @Shear Rate 1000 1/s, Temperature 581 °F	DAM; ISO 11443
	171000 cP @Shear Rate 700 1/s, Temperature 305 °C	171000 cP @Shear Rate 700 1/s, Temperature 581 °F	DAM; ISO 11443
	185000 cP @Shear Rate 1000 1/s, Temperature 295 °C	185000 cP @Shear Rate 1000 1/s, Temperature 563 °F	DAM; ISO 11443
	196000 cP @Shear Rate 500 1/s, Temperature 305 °C	196000 cP @Shear Rate 500 1/s, Temperature 581 °F	DAM; ISO 11443
	215000 cP @Shear Rate 700 1/s, Temperature 295 °C	215000 cP @Shear Rate 700 1/s, Temperature 563 °F	DAM; ISO 11443
	216000 cP @Shear Rate 2000 1/s, Temperature 275 °C	216000 cP @Shear Rate 2000 1/s, Temperature 527 °F	DAM; ISO 11443
	248000 cP @Shear Rate 500 1/s, Temperature 295 °C	248000 cP @Shear Rate 500 1/s, Temperature 563 °F	DAM; ISO 11443
	299000 cP @Shear Rate 1000 1/s, Temperature 275 °C	299000 cP @Shear Rate 1000 1/s, Temperature 527 °F	DAM; ISO 11443
	350000 cP @Shear Rate 700 1/s, Temperature 275 °C	350000 cP @Shear Rate 700 1/s, Temperature 527 °F	DAM; ISO 11443
	404000 cP @Shear Rate 500 1/s, Temperature 275 °C	404000 cP @Shear Rate 500 1/s, Temperature 527 °F	DAM; ISO 11443
Linear Mold Shrinkage, Flow	0.0030 cm/cm @Thickness 2.00 mm	0.0030 in/in @Thickness 0.0787 in	DAM; ISO 294-4
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	DAM; ISO 294-4

Physical Properties	@Thickness 2.00 mm Metric	@Thickness 0.0787 in English	Comments
Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	130 MPa	18900 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	195 MPa	28300 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	3.3 %	3.3 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.0 %	5.0 %	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	7.20 GPa	1040 ksi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	10.0 GPa	1450 ksi	DAM; ISO 527
	@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	
	12.0 kJ/m ²	5.71 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	DAM; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	14.0 kJ/m ²	6.66 ft-lb/in ²	50%RH; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	7.00 J/cm ²	33.3 ft-lb/in ²	DAM; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.20 J/cm ²	34.3 ft-lb/in ²	50%RH; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.20 J/cm ²	39.0 ft-lb/in ²	DAM; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9.20 J/cm ²	43.8 ft-lb/in ²	50%RH; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	1.00 J/cm ² Metric	4.76 ft-lb/in ² English	Comments 79/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.00 J/cm ²	4.76 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.30 J/cm ²	6.19 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.50 J/cm ²	7.14 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1 hour	6800 MPa	986000 psi	50%RH; ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	10.0 MPa	1450 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.172 %, Temperature 100 °C	@Strain 0.172 %, Temperature 212 °F	
	10.0 MPa	1450 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.169 %, Temperature 80.0 °C	@Strain 0.169 %, Temperature 176 °F	
	10.0 MPa	1450 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.159 %, Temperature 80.0 °C	@Strain 0.159 %, Temperature 176 °F	
	10.0 MPa	1450 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.167 %, Temperature 100 °C	@Strain 0.167 %, Temperature 212 °F	
	15.0 MPa	2180 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.244 %, Temperature 80.0 °C	@Strain 0.244 %, Temperature 176 °F	
	15.0 MPa	2180 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.259 %, Temperature 80.0 °C	@Strain 0.259 %, Temperature 176 °F	
	15.0 MPa	2180 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.205 %, Temperature 23.0 °C	@Strain 0.205 %, Temperature 73.4 °F	
	15.0 MPa	2180 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.190 %, Temperature 23.0 °C	@Strain 0.190 %, Temperature 73.4 °F	
	20.0 MPa	2900 psi	50%RH; 1h; Isochronous; ISO 899

Mechanical Properties	Metric @Strain 0.371 %, Temperature 100 °C	English @Strain 0.371 %, Temperature 212 °F	Comments
	20.0 MPa	2900 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.352 %, Temperature 80.0 °C	@Strain 0.352 %, Temperature 176 °F	
	20.0 MPa	2900 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.396 %, Temperature 100 °C	@Strain 0.396 %, Temperature 212 °F	
	20.0 MPa	2900 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.333 %, Temperature 80.0 °C	@Strain 0.333 %, Temperature 176 °F	
	25.0 MPa	3630 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.345 %, Temperature 23.0 °C	@Strain 0.345 %, Temperature 73.4 °F	
	25.0 MPa	3630 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.322 %, Temperature 23.0 °C	@Strain 0.322 %, Temperature 73.4 °F	
	30.0 MPa	4350 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.391 %, Temperature 23.0 °C	@Strain 0.391 %, Temperature 73.4 °F	
	30.0 MPa	4350 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.418 %, Temperature 23.0 °C	@Strain 0.418 %, Temperature 73.4 °F	
	30.0 MPa	4350 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.594 %, Temperature 100 °C	@Strain 0.594 %, Temperature 212 °F	
	30.0 MPa	4350 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.564 %, Temperature 80.0 °C	@Strain 0.564 %, Temperature 176 °F	
	30.0 MPa	4350 psi	50%RH; 10h; Isochronous; ISO 899
	@Strain 0.622 %, Temperature 100 °C	@Strain 0.622 %, Temperature 212 °F	
	30.0 MPa	4350 psi	50%RH; 1h; Isochronous; ISO 899
	@Strain 0.529 %, Temperature 80.0 °C	@Strain 0.529 %, Temperature 176 °F	
	40.0 MPa	5800 psi	50%RH; 1h; Break; Isochronous; ISO 899
	@Strain 0.759 %, Temperature 80.0 °C	@Strain 0.759 %, Temperature 176 °F	

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