

DuPont Performance Polymers Zytel® RS 30G30L NC010 Nylon 610

Category : Polymer , Thermoplastic , Nylon , Nylon 610

Material Notes:

30% Glass Reinforced Renewably Sourced Polyamide 610 Developed for Extrusion Zytel RS 30G30L NC010 is a lubricated 30% glass fiber reinforced polyamide 610 resin containing a minimum of 40% renewably sourced ingredients by weight (60% based on polymer information provided by DuPont Performance Polymers)

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-RS-30G30L-NC010-Nylon-610.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	
	1.31 g/cc	0.0473 lb/in ³	DAM; ISO 1183
Moisture Absorption	1.20 %	1.20 %	DAM; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity	93100 cP	93100 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 280 °C	@Shear Rate 5000 1/s, Temperature 536 °F	
	123000 cP	123000 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 260 °C	@Shear Rate 5000 1/s, Temperature 500 °F	
	135400 cP	135400 cP	ISO 11403-1 -2
	@Shear Rate 5000 1/s, Temperature 250 °C	@Shear Rate 5000 1/s, Temperature 482 °F	
	305600 cP	305600 cP	ISO 11403-1 -2
@Shear Rate 500 1/s, Temperature 280 °C	@Shear Rate 500 1/s, Temperature 536 °F		
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	DAM; ISO 294-4 2577
	0.0070 cm/cm	0.0070 in/in	
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
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Mechanical Properties ^{sk}	Metric ^{Pa}	English ^{psi}	Comments ^{527-1/-2}
	160 MPa	23200 psi	DAM; ISO 527-1/-2
Tensile Stress	7.36 MPa	1070 psi	50%RH; ISO 11403-1 -2
	@Strain 0.230 %, Temperature 150 °C	@Strain 0.230 %, Temperature 302 °F	
	8.44 MPa	1220 psi	50%RH; ISO 11403-1 -2
	@Strain 0.180 %, Temperature 90.0 °C	@Strain 0.180 %, Temperature 194 °F	
	10.17 MPa	1475 psi	DAM; ISO 11403-1 -2
	@Strain 0.310 %, Temperature 150 °C	@Strain 0.310 %, Temperature 302 °F	
	10.94 MPa	1587 psi	50%RH; ISO 11403-1 -2
	@Strain 0.190 %, Temperature 40.0 °C	@Strain 0.190 %, Temperature 104 °F	
	16.49 MPa	2392 psi	50%RH; ISO 11403-1 -2
	@Strain 0.220 %, Temperature 23.0 °C	@Strain 0.220 %, Temperature 73.4 °F	
	18.68 MPa	2709 psi	50%RH; ISO 11403-1 -2
	@Strain 0.210 %, Temperature 0.000 °C	@Strain 0.210 %, Temperature 32.0 °F	
	19.66 MPa	2851 psi	DAM; ISO 11403-1 -2
	@Strain 0.240 %, Temperature 40.0 °C	@Strain 0.240 %, Temperature 104 °F	
	19.79 MPa	2870 psi	DAM; ISO 11403-1 -2
	@Strain 0.460 %, Temperature 90.0 °C	@Strain 0.460 %, Temperature 194 °F	
	20.88 MPa	3028 psi	DAM; ISO 11403-1 -2
	@Strain 0.230 %, Temperature 23.0 °C	@Strain 0.230 %, Temperature 73.4 °F	
	22.51 MPa	3265 psi	DAM; ISO 11403-1 -2
	@Strain 0.230 %, Temperature 0.000 °C	@Strain 0.230 %, Temperature 32.0 °F	
	25.2 MPa	3650 psi	50%RH; ISO 11403-1 -2
	@Strain 0.250 %, Temperature -40.0 °C	@Strain 0.250 %, Temperature -40.0 °F	
	28.2 MPa	4090 psi	50%RH; ISO 11403-1 -2
	@Strain 1.23 %,	@Strain 1.23 %,	

Mechanical Properties	Temperature 150 °C Metric	Temperature 302 °F English	Comments
	30.63 MPa @Strain 0.860 %, Temperature 90.0 °C	4443 psi @Strain 0.860 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	39.8 MPa @Strain 0.840 %, Temperature 40.0 °C	5770 psi @Strain 0.840 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	40.34 MPa @Strain 0.370 %, Temperature -40.0 °C	5851 psi @Strain 0.370 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	40.58 MPa @Strain 2.48 %, Temperature 150 °C	5886 psi @Strain 2.48 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	41.59 MPa @Strain 2.31 %, Temperature 150 °C	6032 psi @Strain 2.31 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	48.43 MPa @Strain 3.85 %, Temperature 150 °C	7024 psi @Strain 3.85 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	49.23 MPa @Strain 1.78 %, Temperature 90.0 °C	7140 psi @Strain 1.78 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	49.24 MPa @Strain 0.570 %, Temperature 0.000 °C	7142 psi @Strain 0.570 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	49.35 MPa @Strain 0.780 %, Temperature 23.0 °C	7158 psi @Strain 0.780 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	53.28 MPa @Strain 1.82 %, Temperature 90.0 °C	7728 psi @Strain 1.82 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	55.92 MPa @Strain 4.50 %, Temperature 150 °C	8111 psi @Strain 4.50 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	62.58 MPa @Strain 0.730 %, Temperature 23.0 °C	9076 psi @Strain 0.730 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	62.93 MPa	9127 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 0.850 %, Temperature 40.0 °C	@Strain 0.850 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	63.21 MPa	9168 psi	50%RH; ISO 11403-1 -2
	@Strain 2.95 %, Temperature 90.0 °C	@Strain 2.95 %, Temperature 194 °F	
	64.45 MPa	9348 psi	50%RH; ISO 11403-1 -2
	@Strain 1.63 %, Temperature 40.0 °C	@Strain 1.63 %, Temperature 104 °F	
	64.96 MPa	9422 psi	DAM; ISO 11403-1 -2
	@Strain 6.96 %, Temperature 150 °C	@Strain 6.96 %, Temperature 302 °F	
	65.29 MPa	9470 psi	DAM; ISO 11403-1 -2
	@Strain 0.730 %, Temperature 0.000 °C	@Strain 0.730 %, Temperature 32.0 °F	
	72.39 MPa	10500 psi	50%RH; ISO 11403-1 -2
	@Strain 0.770 %, Temperature -40.0 °C	@Strain 0.770 %, Temperature -40.0 °F	
	75.33 MPa	10930 psi	DAM; ISO 11403-1 -2
	@Strain 3.49 %, Temperature 90.0 °C	@Strain 3.49 %, Temperature 194 °F	
	79.52 MPa	11530 psi	50%RH; ISO 11403-1 -2
	@Strain 1.49 %, Temperature 23.0 °C	@Strain 1.49 %, Temperature 73.4 °F	
	85.03 MPa	12330 psi	50%RH; ISO 11403-1 -2
	@Strain 2.63 %, Temperature 40.0 °C	@Strain 2.63 %, Temperature 104 °F	
	87.13 MPa	12640 psi	50%RH; ISO 11403-1 -2
	@Strain 1.11 %, Temperature 0.000 °C	@Strain 1.11 %, Temperature 32.0 °F	
	88.37 MPa	12820 psi	DAM; ISO 11403-1 -2
	@Strain 5.52 %, Temperature 90.0 °C	@Strain 5.52 %, Temperature 194 °F	
	98.25 MPa	14250 psi	DAM; ISO 11403-1 -2
	@Strain 0.940 %, Temperature -40.0 °C	@Strain 0.940 %, Temperature -40.0 °F	
	98.66 MPa	14310 psi	DAM; ISO 11403-1 -2
	@Strain 1.70 %, Temperature 40.0 °C	@Strain 1.70 %, Temperature 104 °F	

Mechanical Properties	Metric	English	Comments
	@Strain 1.34 %, Temperature 23.0 °C	@Strain 1.34 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	103.81 MPa	15056 psi	
	@Strain 2.37 %, Temperature 23.0 °C	@Strain 2.37 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	109.37 MPa	15863 psi	
	@Strain 1.34 %, Temperature 0.000 °C	@Strain 1.34 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	113.84 MPa	16511 psi	
	@Strain 1.31 %, Temperature -40.0 °C	@Strain 1.31 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	121.6 MPa	17640 psi	
	@Strain 1.79 %, Temperature 0.000 °C	@Strain 1.79 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	123.05 MPa	17847 psi	
	@Strain 2.83 %, Temperature 40.0 °C	@Strain 2.83 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	135.14 MPa	19600 psi	
	@Strain 2.05 %, Temperature 23.0 °C	@Strain 2.05 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	148.56 MPa	21547 psi	
	@Strain 2.06 %, Temperature 0.000 °C	@Strain 2.06 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	150.01 MPa	21757 psi	
	@Strain 1.54 %, Temperature -40.0 °C	@Strain 1.54 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	151.29 MPa	21943 psi	
	@Strain 1.91 %, Temperature -40.0 °C	@Strain 1.91 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	191.87 MPa	27828 psi	
	@Strain 2.24 %, Temperature -40.0 °C	@Strain 2.24 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
Elongation at Break	5.0 %	5.0 %	DAM; ISO 527-1/-2
	7.0 %	7.0 %	50%RH; ISO 527-1/-2
Tensile Modulus	6.50 GPa	943 ksi	50%RH; ISO 527-1/-2

Mechanical Properties	8.50 GPa Metric	1230 ksi English	DAM: ISO 527-1/-2 Comments
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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