

DuPont Performance Polymers Zytel® RS LC1600 NC010 Nylon 1010

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Plasticized Toughened UV Stabilized Renewably Sourced Polyamide 1010 Developed for Extrusion Zytel RS LC1600 NC010 is a renewable sourced Polyamide 1010 containing a minimum of 60% renewably sourced ingredient by weight. It is flexible toughened and pIInformation provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-RS-LC1600-NC010-Nylon-1010.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	DAM; ISO 1183
Viscosity	260000 cP @Temperature 250 °C	260000 cP @Temperature 482 °F	DAM; @ 1000 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.026 cm/cm	0.026 in/in	DAM; ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Stress	27.0 MPa @Strain 50.0 %	3920 psi @Strain 50.0 %	50%RH; ISO 527-1/-2
	29.0 MPa @Strain 50.0 %	4210 psi @Strain 50.0 %	DAM; ISO 527-1/-2
	0.900 MPa @Strain 0.240 %, Temperature 40.0 °C	131 psi @Strain 0.240 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	0.960 MPa @Strain 0.250 %, Temperature 40.0 °C	139 psi @Strain 0.250 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	1.26 MPa @Strain 0.240 %, Temperature 23.0 °C	183 psi @Strain 0.240 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	1.42 MPa @Strain 0.190 %, Temperature 23.0 °C	206 psi @Strain 0.190 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	1.93 MPa @Strain 0.910 %,	280 psi @Strain 0.910 %,	50%RH; ISO 11403-1 -2

Mechanical Properties	Temperature 90.0 °C Metric	Temperature 194 °F English	Comments
	2.08 MPa @Strain 0.180 %, Temperature 0.000 °C	302 psi @Strain 0.180 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	2.23 MPa @Strain 0.180 %, Temperature 0.000 °C	323 psi @Strain 0.180 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	3.28 MPa @Strain 4.15 %, Temperature 150 °C	476 psi @Strain 4.15 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	3.45 MPa @Strain 4.11 %, Temperature 150 °C	500 psi @Strain 4.11 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	5.26 MPa @Strain 2.77 %, Temperature 90.0 °C	763 psi @Strain 2.77 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	7.22 MPa @Strain 50.0 %, Temperature 150 °C	1050 psi @Strain 50.0 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	7.56 MPa @Strain 50.0 %, Temperature 150 °C	1100 psi @Strain 50.0 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	12.93 MPa @Strain 31.42 %, Temperature 90.0 °C	1875 psi @Strain 31.42 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	13.94 MPa @Strain 39.63 %, Temperature 90.0 °C	2022 psi @Strain 39.63 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	18.75 MPa @Strain 0.790 %, Temperature -40.0 °C	2719 psi @Strain 0.790 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	20.91 MPa @Strain 33.17 %, Temperature 40.0 °C	3033 psi @Strain 33.17 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	22.16 MPa @Strain 34.18 %, Temperature 40.0 °C	3214 psi @Strain 34.18 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	23.41 MPa	3395 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 1.47 %, Temperature -20.0 °C	@Strain 1.47 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	24.52 MPa	3556 psi	DAM; ISO 11403-1 -2
	@Strain 1.09 %, Temperature -40.0 °C	@Strain 1.09 %, Temperature -40.0 °F	
	26.31 MPa	3816 psi	50%RH; ISO 11403-1 -2
	@Strain 34.51 %, Temperature 23.0 °C	@Strain 34.51 %, Temperature 73.4 °F	
	29.71 MPa	4309 psi	DAM; ISO 11403-1 -2
	@Strain 26.46 %, Temperature 23.0 °C	@Strain 26.46 %, Temperature 73.4 °F	
	35.0 MPa	5080 psi	50%RH; ISO 11403-1 -2
	@Strain 13.0 %, Temperature 0.000 °C	@Strain 13.0 %, Temperature 32.0 °F	
	39.77 MPa	5768 psi	DAM; ISO 11403-1 -2
	@Strain 2.88 %, Temperature -20.0 °C	@Strain 2.88 %, Temperature -4.00 °F	
	41.0 MPa	5950 psi	DAM; ISO 11403-1 -2
	@Strain 15.0 %, Temperature 0.000 °C	@Strain 15.0 %, Temperature 32.0 °F	
	51.34 MPa	7446 psi	50%RH; ISO 11403-1 -2
	@Strain 10.19 %, Temperature -20.0 °C	@Strain 10.19 %, Temperature -4.00 °F	
	53.85 MPa	7810 psi	DAM; ISO 11403-1 -2
	@Strain 12.08 %, Temperature -20.0 °C	@Strain 12.08 %, Temperature -4.00 °F	
	65.89 MPa	9557 psi	DAM; ISO 11403-1 -2
	@Strain 4.72 %, Temperature -40.0 °C	@Strain 4.72 %, Temperature -40.0 °F	
	66.65 MPa	9667 psi	50%RH; ISO 11403-1 -2
	@Strain 4.56 %, Temperature -40.0 °C	@Strain 4.56 %, Temperature -40.0 °F	
	73.74 MPa	10700 psi	DAM; ISO 11403-1 -2
	@Strain 9.47 %, Temperature -40.0 °C	@Strain 9.47 %, Temperature -40.0 °F	
	74.67 MPa	10830 psi	50%RH; ISO 11403-1 -2
	@Strain 9.53 %,	@Strain 9.53 %,	

Mechanical Properties	Temperature -40.0 °C	Temperature -40.0 °F	Comments
Elongation at Break	Metric ≥ 50 %	English ≥ 50 %	DAM; ISO 527-1/-2
	≥ 50 %	≥ 50 %	50%RH; ISO 527-1/-2
	200 %	200 %	DAM; 50mm/min; ISO 527-1/-2
	200 %	200 %	50%RH; 50mm/min; ISO 527-1/-2
Tensile Modulus	0.420 GPa	60.9 ksi	50%RH; ISO 527-1/-2
	0.590 GPa	85.6 ksi	DAM; ISO 527-1/-2
	0.149 GPa	21.6 ksi	50%RH; ISO 11403-1 -2
	@Temperature 120 °C	@Temperature 248 °F	
	0.150 GPa	21.8 ksi	DAM; ISO 11403-1 -2
	@Temperature 120 °C	@Temperature 248 °F	
	0.355 GPa	51.5 ksi	50%RH; ISO 11403-1 -2
	@Temperature 40.0 °C	@Temperature 104 °F	
	0.376 GPa	54.5 ksi	DAM; ISO 11403-1 -2
	@Temperature 40.0 °C	@Temperature 104 °F	
	2.128 GPa	308.6 ksi	DAM; ISO 11403-1 -2
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	2.443 GPa	354.3 ksi	50%RH; ISO 11403-1 -2
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Secant Modulus	0.0648 GPa	9.40 ksi	DAM; ISO 11403-1 -2
	@Strain 34.18 %, Temperature 40.0 °C	@Strain 34.18 %, Temperature 104 °F	
	0.0762 GPa	11.1 ksi	50%RH; ISO 11403-1 -2
	@Strain 34.51 %, Temperature 23.0 °C	@Strain 34.51 %, Temperature 73.4 °F	
	0.269 GPa	39.0 ksi	50%RH; ISO 11403-1 -2
	@Strain 13.0 %, Temperature 0.000 °C	@Strain 13.0 %, Temperature 32.0 °F	
	0.273 GPa	39.6 ksi	DAM; ISO 11403-1 -2
	@Strain 15.0 %, Temperature 0.000 °C	@Strain 15.0 %, Temperature 32.0 °F	
	0.375 GPa	54.4 ksi	50%RH; ISO 11403-1 -2
	@Strain 0.240 %,	@Strain 0.240 %,	

Mechanical Properties	Temperature 40.0 °C Metric 0.384 GPa	Temperature 104 °F English 55.7 ksi	Comments
	@Strain 0.250 %, Temperature 40.0 °C	@Strain 0.250 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	0.504 GPa @Strain 10.19 %, Temperature -20.0 °C	73.1 ksi @Strain 10.19 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	0.525 GPa @Strain 0.240 %, Temperature 23.0 °C	76.1 ksi @Strain 0.240 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	0.747 GPa @Strain 0.190 %, Temperature 23.0 °C	108 ksi @Strain 0.190 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	1.16 GPa @Strain 0.180 %, Temperature 0.000 °C	168 ksi @Strain 0.180 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	1.24 GPa @Strain 0.180 %, Temperature 0.000 °C	180 ksi @Strain 0.180 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	1.3809 GPa @Strain 2.88 %, Temperature -20.0 °C	200.29 ksi @Strain 2.88 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	1.40 GPa @Strain 4.72 %, Temperature -40.0 °C	202 ksi @Strain 4.72 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	1.46 GPa @Strain 4.56 %, Temperature -40.0 °C	212 ksi @Strain 4.56 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	1.59 GPa @Strain 1.47 %, Temperature -20.0 °C	231 ksi @Strain 1.47 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	2.25 GPa @Strain 1.09 %, Temperature -40.0 °C	326 ksi @Strain 1.09 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	2.37 GPa @Strain 0.790 %, Temperature -40.0 °C	344 ksi @Strain 0.790 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
Charpy Impact Unnotched	NB	NB	DAM; ISO 179/1eU

Mechanical Properties

Metric

English

Comments

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