

DuPont Performance Polymers Zytel® RS LC1010 NC010 Nylon 1010 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Unreinforced Renewably Sourced Polyamide 1010 Developed for Extrusion Zytel RS LC1000 BK385 is a renewable sourced Polyamide 1010 containing a minimum of 90% renewably sourced ingredient by weight. The material is flexible unreinforced UV and heat stabInformation provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-RS-LC1010-NC010-Nylon-1010-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	DAM; ISO 1183
Moisture Absorption	1.10 % @Thickness 2.00 mm	1.10 % @Thickness 0.0787 in	DAM; Sim. to ISO 62
Viscosity	230000 cP @Temperature 250 °C	230000 cP @Temperature 482 °F	DAM; @ 1000 sec-1; ISO 11443
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 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	0.340 MPa @Strain 0.230 %, Temperature 150 °C	49.3 psi @Strain 0.230 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	1.01 MPa @Strain 0.250 %, Temperature 90.0 °C	146 psi @Strain 0.250 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	1.72 MPa @Strain 1.02 %, Temperature 150 °C	249 psi @Strain 1.02 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	1.82 MPa @Strain 0.250 %, Temperature 40.0 °C	264 psi @Strain 0.250 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	3.18 MPa @Strain 0.150 %, Temperature 0.000 °C	461 psi @Strain 0.150 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	4.39 MPa	637 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 0.210 %, Temperature 0.000 °C	@Strain 0.210 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	4.83 MPa	701 psi	
	@Strain 0.250 %, Temperature 23.0 °C	@Strain 0.250 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	5.13 MPa	744 psi	
	@Strain 0.200 %, Temperature -40.0 °C	@Strain 0.200 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	5.30 MPa	769 psi	
	@Strain 0.270 %, Temperature 0.000 °C	@Strain 0.270 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	5.34 MPa	775 psi	
	@Strain 4.52 %, Temperature 150 °C	@Strain 4.52 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	6.68 MPa	969 psi	
	@Strain 1.93 %, Temperature 90.0 °C	@Strain 1.93 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	6.72 MPa	975 psi	
	@Strain 6.01 %, Temperature 150 °C	@Strain 6.01 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	7.98 MPa	1160 psi	
	@Strain 9.99 %, Temperature 150 °C	@Strain 9.99 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	9.18 MPa	1330 psi	
	@Strain 0.390 %, Temperature -40.0 °C	@Strain 0.390 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	9.34 MPa	1350 psi	
	@Strain 0.690 %, Temperature 23.0 °C	@Strain 0.690 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	9.63 MPa	1400 psi	
	@Strain 15.15 %, Temperature 150 °C	@Strain 15.15 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	9.82 MPa	1420 psi	
	@Strain 19.73 %, Temperature 150 °C	@Strain 19.73 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	10.08 MPa	1462 psi	
	@Strain 1.19 %, Temperature 40.0 °C	@Strain 1.19 %, Temperature 104 °F	DAM; ISO 11403-1 -2

Mechanical Properties	Metric MPa	English	Comments
	@Strain 20.97 %, Temperature 150 °C	@Strain 20.97 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	12.03 MPa	1745 psi	
	@Strain 134.97 %, Temperature 150 °C	@Strain 134.97 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	12.38 MPa	1796 psi	
	@Strain 143.05 %, Temperature 150 °C	@Strain 143.05 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	12.59 MPa	1826 psi	
	@Strain 4.43 %, Temperature 90.0 °C	@Strain 4.43 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	14.72 MPa	2135 psi	
	@Strain 6.46 %, Temperature 90.0 °C	@Strain 6.46 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	16.91 MPa	2453 psi	
	@Strain 0.840 %, Temperature 0.000 °C	@Strain 0.840 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	17.22 MPa	2498 psi	
	@Strain 9.14 %, Temperature 90.0 °C	@Strain 9.14 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	18.84 MPa	2733 psi	
	@Strain 13.03 %, Temperature 90.0 °C	@Strain 13.03 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	20.01 MPa	2902 psi	
	@Strain 17.69 %, Temperature 90.0 °C	@Strain 17.69 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	21.21 MPa	3076 psi	
	@Strain 29.48 %, Temperature 90.0 °C	@Strain 29.48 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	22.97 MPa	3332 psi	
	@Strain 123.75 %, Temperature 90.0 °C	@Strain 123.75 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	23.66 MPa	3432 psi	
	@Strain 124.65 %, Temperature 90.0 °C	@Strain 124.65 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	26.25 MPa	3807 psi	
			DAM; ISO 11403-1 -2

Mechanical Properties	@Strain 5.74 %, Metric Temperature 40.0 °C	@Strain 5.74 %, English Temperature 104 °F	Comments
	28.95 MPa	4199 psi	50%RH; ISO 11403-1 -2
	@Strain 7.45 %, Temperature 40.0 °C	@Strain 7.45 %, Temperature 104 °F	
	30.08 MPa	4363 psi	50%RH; ISO 11403-1 -2
	@Strain 2.64 %, Temperature 23.0 °C	@Strain 2.64 %, Temperature 73.4 °F	
	32.38 MPa	4696 psi	DAM; ISO 11403-1 -2
	@Strain 12.17 %, Temperature 40.0 °C	@Strain 12.17 %, Temperature 104 °F	
	33.88 MPa	4914 psi	50%RH; ISO 11403-1 -2
	@Strain 1.73 %, Temperature 0.000 °C	@Strain 1.73 %, Temperature 32.0 °F	
	35.84 MPa	5198 psi	50%RH; ISO 11403-1 -2
	@Strain 37.96 %, Temperature 40.0 °C	@Strain 37.96 %, Temperature 104 °F	
	35.9 MPa	5210 psi	DAM; ISO 11403-1 -2
	@Strain 33.83 %, Temperature 40.0 °C	@Strain 33.83 %, Temperature 104 °F	
	36.26 MPa	5259 psi	50%RH; ISO 11403-1 -2
	@Strain 123.61 %, Temperature 40.0 °C	@Strain 123.61 %, Temperature 104 °F	
	36.53 MPa	5298 psi	50%RH; ISO 11403-1 -2
	@Strain 22.75 %, Temperature 40.0 °C	@Strain 22.75 %, Temperature 104 °F	
	37.33 MPa	5414 psi	50%RH; ISO 11403-1 -2
	@Strain 4.84 %, Temperature 23.0 °C	@Strain 4.84 %, Temperature 73.4 °F	
	42.04 MPa	6097 psi	50%RH; ISO 11403-1 -2
	@Strain 8.77 %, Temperature 23.0 °C	@Strain 8.77 %, Temperature 73.4 °F	
	45.71 MPa	6630 psi	50%RH; ISO 11403-1 -2
	@Strain 2.12 %, Temperature -40.0 °C	@Strain 2.12 %, Temperature -40.0 °F	
	46.79 MPa	6786 psi	50%RH; ISO 11403-1 -2
	@Strain 20.9 %, Temperature 23.0 °C	@Strain 20.9 %, Temperature 73.4 °F	

Mechanical Properties	47.6 MPa Metric	6900 psi English	Comments DAM; ISO 11403-1 -2
	@Strain 2.65 %, Temperature 0.000 °C	@Strain 2.65 %, Temperature 32.0 °F	
	48.23 MPa	6995 psi	DAM; ISO 11403-1 -2
	@Strain 3.40 %, Temperature 23.0 °C	@Strain 3.40 %, Temperature 73.4 °F	
	49.13 MPa	7126 psi	DAM; ISO 11403-1 -2
	@Strain 2.35 %, Temperature -40.0 °C	@Strain 2.35 %, Temperature -40.0 °F	
	51.6 MPa	7480 psi	50%RH; ISO 11403-1 -2
	@Strain 3.22 %, Temperature 0.000 °C	@Strain 3.22 %, Temperature 32.0 °F	
	59.13 MPa	8576 psi	50%RH; ISO 11403-1 -2
	@Strain 5.77 %, Temperature 0.000 °C	@Strain 5.77 %, Temperature 32.0 °F	
	62.07 MPa	9003 psi	50%RH; ISO 11403-1 -2
	@Strain 16.38 %, Temperature 0.000 °C	@Strain 16.38 %, Temperature 32.0 °F	
	67.4 MPa	9780 psi	50%RH; ISO 11403-1 -2
	@Strain 3.69 %, Temperature -40.0 °C	@Strain 3.69 %, Temperature -40.0 °F	
	71.74 MPa	10410 psi	DAM; ISO 11403-1 -2
	@Strain 4.04 %, Temperature -40.0 °C	@Strain 4.04 %, Temperature -40.0 °F	
	76.32 MPa	11070 psi	50%RH; ISO 11403-1 -2
	@Strain 4.75 %, Temperature -40.0 °C	@Strain 4.75 %, Temperature -40.0 °F	
	83.07 MPa	12050 psi	DAM; ISO 11403-1 -2
	@Strain 5.65 %, Temperature -40.0 °C	@Strain 5.65 %, Temperature -40.0 °F	
	89.17 MPa	12930 psi	50%RH; ISO 11403-1 -2
	@Strain 11.02 %, Temperature -40.0 °C	@Strain 11.02 %, Temperature -40.0 °F	
Tensile Strength, Yield	43.0 MPa	6240 psi	50%RH; ISO 527-1/-2
	52.0 MPa	7540 psi	DAM; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	DAM; Nominal; ISO 527-1/-2
	>= 50 %	>= 50 %	50%RH; Nominal; ISO 527-1/-2

Mechanical Properties	Metric	English	Comments
	30 %	30 %	50%RH; ISO 527-1/-2
Tensile Modulus	0.950 GPa	138 ksi	50%RH; ISO 527-1/-2

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