

DuPont Performance Polymers Zytel® RS LC1000 BK385 Nylon 1010

Category : Polymer , Thermoplastic , Nylon

Material Notes:

UV Stabilized 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 stable information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-RS-LC1000-BK385-Nylon-1010.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	DAM; ISO 1183
Moisture Absorption	1.00 %	1.00 %	DAM; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Viscosity Test	130 cm ³ /g	130 cm ³ /g	DAM; ISO 307 1157 1628
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 in/in	DAM; ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	DAM; ISO 294-4 2577

Mechanical Properties	Metric	English	Comments
Tensile Stress	0.270 MPa	39.2 psi	50%RH; ISO 11403-1 -2
	@Strain 0.0700 %, Temperature 150 °C	@Strain 0.0700 %, Temperature 302 °F	
	0.300 MPa	43.5 psi	DAM; ISO 11403-1 -2
	@Strain 0.0800 %, Temperature 150 °C	@Strain 0.0800 %, Temperature 302 °F	
	0.450 MPa	65.3 psi	50%RH; ISO 11403-1 -2
	@Strain 0.0300 %, Temperature -40.0 °C	@Strain 0.0300 %, Temperature -40.0 °F	
	0.450 MPa	65.3 psi	50%RH; ISO 11403-1 -2
	@Strain 0.100 %, Temperature 90.0 °C	@Strain 0.100 %, Temperature 194 °F	
	0.480 MPa	69.6 psi	DAM; ISO 11403-1 -2
	@Strain 0.0200 %, Temperature -40.0 °C	@Strain 0.0200 %, Temperature -40.0 °F	
	0.490 MPa	71.1 psi	DAM; ISO 11403-1 -2
	@Strain 0.0900 %, Temperature 90.0 °C	@Strain 0.0900 %, Temperature 194 °F	

Mechanical Properties	Metric MPa	English	Comments
	@Strain 0.0400 %, Temperature -20.0 °C	@Strain 0.0400 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	0.840 MPa	122 psi	
	@Strain 0.0800 %, Temperature 40.0 °C	@Strain 0.0800 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	0.840 MPa	122 psi	
	@Strain 0.0500 %, Temperature -20.0 °C	@Strain 0.0500 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	0.930 MPa	135 psi	
	@Strain 0.0200 %, Temperature 0.000 °C	@Strain 0.0200 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	1.03 MPa	149 psi	
	@Strain 0.0700 %, Temperature 40.0 °C	@Strain 0.0700 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	1.29 MPa	187 psi	
	@Strain 0.0600 %, Temperature 23.0 °C	@Strain 0.0600 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	1.39 MPa	202 psi	
	@Strain 0.0500 %, Temperature 0.000 °C	@Strain 0.0500 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	1.70 MPa	247 psi	
	@Strain 0.0600 %, Temperature 23.0 °C	@Strain 0.0600 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	1.78 MPa	258 psi	
	@Strain 0.100 %, Temperature -40.0 °C	@Strain 0.100 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	1.92 MPa	278 psi	
	@Strain 0.110 %, Temperature -40.0 °C	@Strain 0.110 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	2.85 MPa	413 psi	
	@Strain 0.110 %, Temperature 0.000 °C	@Strain 0.110 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	3.15 MPa	457 psi	
	@Strain 0.170 %, Temperature -20.0 °C	@Strain 0.170 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	3.37 MPa	489 psi	
			DAM; ISO 11403-1 -2

Mechanical Properties	Metric @Strain 0.140 %, Temperature -20.0 °C	English @Strain 0.140 %, Temperature -4.00 °F	Comments
	3.69 MPa	535 psi	
	@Strain 0.180 %, Temperature -40.0 °C	@Strain 0.180 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	3.72 MPa	540 psi	
	@Strain 0.180 %, Temperature -40.0 °C	@Strain 0.180 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	4.22 MPa	612 psi	
	@Strain 0.250 %, Temperature 23.0 °C	@Strain 0.250 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	4.37 MPa	634 psi	
	@Strain 0.180 %, Temperature 0.000 °C	@Strain 0.180 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	4.71 MPa	683 psi	
	@Strain 0.190 %, Temperature 0.000 °C	@Strain 0.190 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	4.78 MPa	693 psi	
	@Strain 2.86 %, Temperature 150 °C	@Strain 2.86 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	5.09 MPa	738 psi	
	@Strain 0.230 %, Temperature 23.0 °C	@Strain 0.230 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	5.35 MPa	776 psi	
	@Strain 0.250 %, Temperature -40.0 °C	@Strain 0.250 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	5.45 MPa	790 psi	
	@Strain 0.250 %, Temperature -40.0 °C	@Strain 0.250 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	5.74 MPa	833 psi	
	@Strain 0.230 %, Temperature -20.0 °C	@Strain 0.230 %, Temperature -4.00 °F	DAM; ISO 11403-1 -2
	5.84 MPa	847 psi	
	@Strain 3.20 %, Temperature 150 °C	@Strain 3.20 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	6.48 MPa	940 psi	
	@Strain 0.430 %, Temperature 40.0 °C	@Strain 0.430 %, Temperature 104 °F	DAM; ISO 11403-1 -2

Mechanical Properties	10.0 MPa Metric	1450 psi English	Comments 50%RH; ISO 11403-1 -2
	@Strain 13.37 %, Temperature 150 °C	@Strain 13.37 %, Temperature 302 °F	
	11.04 MPa	1601 psi	DAM; ISO 11403-1 -2
	@Strain 2.94 %, Temperature 90.0 °C	@Strain 2.94 %, Temperature 194 °F	
	11.12 MPa	1613 psi	DAM; ISO 11403-1 -2
	@Strain 14.0 %, Temperature 150 °C	@Strain 14.0 %, Temperature 302 °F	
	11.26 MPa	1633 psi	50%RH; ISO 11403-1 -2
	@Strain 24.48 %, Temperature 150 °C	@Strain 24.48 %, Temperature 302 °F	
	11.43 MPa	1658 psi	50%RH; ISO 11403-1 -2
	@Strain 70.4 %, Temperature 150 °C	@Strain 70.4 %, Temperature 302 °F	
	11.6 MPa	1680 psi	50%RH; ISO 11403-1 -2
	@Strain 100.03 %, Temperature 150 °C	@Strain 100.03 %, Temperature 302 °F	
	12.25 MPa	1777 psi	DAM; ISO 11403-1 -2
	@Strain 25.96 %, Temperature 150 °C	@Strain 25.96 %, Temperature 302 °F	
	12.31 MPa	1785 psi	DAM; ISO 11403-1 -2
	@Strain 71.22 %, Temperature 150 °C	@Strain 71.22 %, Temperature 302 °F	
	12.48 MPa	1810 psi	DAM; ISO 11403-1 -2
	@Strain 100.05 %, Temperature 150 °C	@Strain 100.05 %, Temperature 302 °F	
	12.64 MPa	1833 psi	50%RH; ISO 11403-1 -2
	@Strain 4.33 %, Temperature 90.0 °C	@Strain 4.33 %, Temperature 194 °F	
	19.82 MPa	2875 psi	50%RH; ISO 11403-1 -2
	@Strain 14.51 %, Temperature 90.0 °C	@Strain 14.51 %, Temperature 194 °F	
	19.95 MPa	2894 psi	50%RH; ISO 11403-1 -2
	@Strain 2.38 %, Temperature 40.0 °C	@Strain 2.38 %, Temperature 104 °F	
	21.17 MPa	3070 psi	50%RH; ISO 11403-1 -2
	@Strain 73.09 %,	@Strain 73.09 %,	

Mechanical Properties	Temperature 90.0 °C	Temperature 194 °F	Comments
	Metric	English	
	21.22 MPa	3078 psi	
	@Strain 26.5 %, Temperature 90.0 °C	@Strain 26.5 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	21.41 MPa	3105 psi	
	@Strain 13.33 %, Temperature 90.0 °C	@Strain 13.33 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	21.59 MPa	3131 psi	
	@Strain 100.03 %, Temperature 90.0 °C	@Strain 100.03 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	22.9 MPa	3320 psi	
	@Strain 72.74 %, Temperature 90.0 °C	@Strain 72.74 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	22.97 MPa	3332 psi	
	@Strain 25.83 %, Temperature 90.0 °C	@Strain 25.83 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	23.42 MPa	3397 psi	
	@Strain 100.03 %, Temperature 90.0 °C	@Strain 100.03 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	24.01 MPa	3482 psi	
	@Strain 1.04 %, Temperature -20.0 °C	@Strain 1.04 %, Temperature -4.00 °F	50%RH; ISO 11403-1 -2
	30.88 MPa	4479 psi	
	@Strain 1.41 %, Temperature 0.000 °C	@Strain 1.41 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	34.21 MPa	4962 psi	
	@Strain 70.99 %, Temperature 40.0 °C	@Strain 70.99 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	34.57 MPa	5014 psi	
	@Strain 100.03 %, Temperature 40.0 °C	@Strain 100.03 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	36.0 MPa	5220 psi	
	@Strain 12.5 %, Temperature 40.0 °C	@Strain 12.5 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	37.15 MPa	5388 psi	
	@Strain 24.59 %, Temperature 40.0 °C	@Strain 24.59 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	38.31 MPa	5556 psi	

Mechanical Properties	Metric	English	DAM: ISO 11403-1 -2 Comments
	@Strain 68.85 %, Temperature 40.0 °C	@Strain 68.85 %, Temperature 104 °F	
	39.49 MPa	5728 psi	
	@Strain 100.05 %, Temperature 40.0 °C	@Strain 100.05 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	39.52 MPa	5732 psi	
	@Strain 70.06 %, Temperature 23.0 °C	@Strain 70.06 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2

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