

DuPont Performance Polymers Zytel® RS LC1600 BK385 Nylon 1010 (Unverified Data**)

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Nylon

Material Notes:

Zytel® RS LC1600 BK385 is a renewable sourced Polyamide 1010 containing a minimum of 60% renewably sourced ingredient by weight. It is flexible, toughened, plasticized, UV and heat stabilized and suitable for multiple extrusion applications. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-RS-LC1600-BK385-Nylon-1010-nnbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	DAM; ISO 1183
Linear Mold Shrinkage, Flow	0.020 cm/cm	0.020 in/in	DAM; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	DAM; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	40.0 MPa @Temperature 23.0 °C	5800 psi @Temperature 73.4 °F	50%RH; ISO 527
	43.0 MPa @Temperature 23.0 °C	6240 psi @Temperature 73.4 °F	DAM; ISO 527
Tensile Stress	0.0300 MPa @Strain 0.000 %, Temperature 40.0 °C	4.35 psi @Strain 0.000 %, Temperature 104 °F	DAM; ISO 11403-1/-2
	0.0500 MPa @Strain 0.000 %, Temperature 40.0 °C	7.25 psi @Strain 0.000 %, Temperature 104 °F	50%RH; ISO 11403-1/-2
	0.0600 MPa @Strain 0.000 %, Temperature 60.0 °C	8.70 psi @Strain 0.000 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	0.0700 MPa @Strain 0.000 %, Temperature 23.0 °C	10.2 psi @Strain 0.000 %, Temperature 73.4 °F	50%RH; ISO 11403-1/-2
	0.0800 MPa @Strain 0.000 %, Temperature 60.0 °C	11.6 psi @Strain 0.000 %, Temperature 140 °F	50%RH; ISO 11403-1/-2
	0.0800 MPa	11.6 psi	

Mechanical Properties	Metric @Strain 0.000 %, Temperature 90.0 °C	English @Strain 0.000 %, Temperature 194 °F	Comments 50%RH; ISO 11403-1/-2
	0.0800 MPa	11.6 psi	
	@Strain 0.000 %, Temperature 90.0 °C	@Strain 0.000 %, Temperature 194 °F	DAM; ISO 11403-1/-2
	0.100 MPa	14.5 psi	
	@Strain 0.000 %, Temperature 120 °C	@Strain 0.000 %, Temperature 248 °F	50%RH; ISO 11403-1/-2
	0.100 MPa	14.5 psi	
	@Strain 0.000 %, Temperature 120 °C	@Strain 0.000 %, Temperature 248 °F	DAM; ISO 11403-1/-2
	0.100 MPa	14.5 psi	
	@Strain 0.000 %, Temperature 23.0 °C	@Strain 0.000 %, Temperature 73.4 °F	DAM; ISO 11403-1/-2
	0.130 MPa	18.9 psi	
	@Strain 0.000 %, Temperature 150 °C	@Strain 0.000 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	0.130 MPa	18.9 psi	
	@Strain 0.000 %, Temperature 150 °C	@Strain 0.000 %, Temperature 302 °F	50%RH; ISO 11403-1/-2
	0.150 MPa	21.8 psi	
	@Strain 0.000 %, Temperature -40.0 °C	@Strain 0.000 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	0.160 MPa	23.2 psi	
	@Strain 0.000 %, Temperature 0.000 °C	@Strain 0.000 %, Temperature 32.0 °F	DAM; ISO 11403-1/-2
	0.200 MPa	29.0 psi	
	@Strain 0.000 %, Temperature 0.000 °C	@Strain 0.000 %, Temperature 32.0 °F	50%RH; ISO 11403-1/-2
	0.240 MPa	34.8 psi	
	@Strain 0.000 %, Temperature -40.0 °C	@Strain 0.000 %, Temperature -40.0 °F	50%RH; ISO 11403-1/-2
	0.240 MPa	34.8 psi	
	@Strain 0.000 %, Temperature -20.0 °C	@Strain 0.000 %, Temperature -4.00 °F	DAM; ISO 11403-1/-2
	0.270 MPa	39.2 psi	
	@Strain 0.000 %, Temperature -20.0 °C	@Strain 0.000 %, Temperature -4.00 °F	50%RH; ISO 11403-1/-2

Mechanical Properties	Metric MPa	English	Comments
	@Strain 0.0300 %, Temperature -40.0 °C	@Strain 0.0300 %, Temperature -40.0 °F	50%RH; ISO 11403-1/-2
	0.430 MPa	62.4 psi	DAM; ISO 11403-1/-2
	@Strain 0.0200 %, Temperature -40.0 °C	@Strain 0.0200 %, Temperature -40.0 °F	
	0.450 MPa	65.3 psi	50%RH; ISO 11403-1/-2
	@Strain 0.240 %, Temperature 120 °C	@Strain 0.240 %, Temperature 248 °F	
	0.750 MPa	109 psi	50%RH; ISO 11403-1/-2
	@Strain 0.250 %, Temperature 60.0 °C	@Strain 0.250 %, Temperature 140 °F	
	0.900 MPa	131 psi	50%RH; ISO 11403-1/-2
	@Strain 0.240 %, Temperature 40.0 °C	@Strain 0.240 %, Temperature 104 °F	
	0.910 MPa	132 psi	50%RH; ISO 11403-1/-2
	@Strain 0.0700 %, Temperature -20.0 °C	@Strain 0.0700 %, Temperature -4.00 °F	
	0.950 MPa	138 psi	DAM; ISO 11403-1/-2
	@Strain 0.0600 %, Temperature -20.0 °C	@Strain 0.0600 %, Temperature -4.00 °F	
	0.960 MPa	139 psi	DAM; ISO 11403-1/-2
	@Strain 0.250 %, Temperature 40.0 °C	@Strain 0.250 %, Temperature 104 °F	
	1.07 MPa	155 psi	DAM; ISO 11403-1/-2
	@Strain 0.600 %, Temperature 120 °C	@Strain 0.600 %, Temperature 248 °F	
	1.16 MPa	168 psi	DAM; ISO 11403-1/-2
	@Strain 0.0600 %, Temperature -40.0 °C	@Strain 0.0600 %, Temperature -40.0 °F	
	1.26 MPa	183 psi	50%RH; ISO 11403-1/-2
	@Strain 0.240 %, Temperature 23.0 °C	@Strain 0.240 %, Temperature 73.4 °F	
	1.27 MPa	184 psi	50%RH; ISO 11403-1/-2
	@Strain 0.0700 %, Temperature -40.0 °C	@Strain 0.0700 %, Temperature -40.0 °F	
	1.42 MPa	206 psi	DAM; ISO 11403-1/-2

Mechanical Properties	@Strain 0.190 %, Metric Temperature 23.0 °C	@Strain 0.190 %, English Temperature 73.4 °F	Comments
	1.81 MPa @Strain 0.0900 %, Temperature -40.0 °C	263 psi @Strain 0.0900 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	1.93 MPa @Strain 0.910 %, Temperature 90.0 °C	280 psi @Strain 0.910 %, Temperature 194 °F	50%RH; ISO 11403-1/-2
	2.07 MPa @Strain 0.100 %, Temperature -40.0 °C	300 psi @Strain 0.100 %, Temperature -40.0 °F	50%RH; ISO 11403-1/-2
	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
	2.13 MPa @Strain 0.150 %, Temperature -20.0 °C	309 psi @Strain 0.150 %, Temperature -4.00 °F	50%RH; ISO 11403-1/-2
	2.21 MPa @Strain 0.130 %, Temperature -20.0 °C	321 psi @Strain 0.130 %, Temperature -4.00 °F	DAM; 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
	2.60 MPa @Strain 0.130 %, Temperature -40.0 °C	377 psi @Strain 0.130 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	2.87 MPa @Strain 0.130 %, Temperature -40.0 °C	416 psi @Strain 0.130 %, Temperature -40.0 °F	50%RH; 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
	3.33 MPa @Strain 0.160 %, Temperature -40.0 °C	483 psi @Strain 0.160 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	3.37 MPa @Strain 0.220 %, Temperature -20.0 °C	489 psi @Strain 0.220 %, Temperature -4.00 °F	50%RH; ISO 11403-1/-2

Mechanical Properties	3.38 MPa Metric	490 psi English	Comments
	@Strain 0.200 %, Temperature -20.0 °C	@Strain 0.200 %, Temperature -4.00 °F	DAM; ISO 11403-1/-2
	3.45 MPa	500 psi	
	@Strain 4.11 %, Temperature 150 °C	@Strain 4.11 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	3.59 MPa	521 psi	
	@Strain 1.28 %, Temperature 60.0 °C	@Strain 1.28 %, Temperature 140 °F	DAM; ISO 11403-1/-2
	3.66 MPa	531 psi	
	@Strain 0.170 %, Temperature -40.0 °C	@Strain 0.170 %, Temperature -40.0 °F	50%RH; ISO 11403-1/-2
	3.99 MPa	579 psi	
	@Strain 0.190 %, Temperature -40.0 °C	@Strain 0.190 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	4.41 MPa	640 psi	
	@Strain 0.200 %, Temperature -40.0 °C	@Strain 0.200 %, Temperature -40.0 °F	50%RH; ISO 11403-1/-2
	4.68 MPa	679 psi	
	@Strain 0.210 %, Temperature -40.0 °C	@Strain 0.210 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	5.15 MPa	747 psi	
	@Strain 0.230 %, Temperature -40.0 °C	@Strain 0.230 %, Temperature -40.0 °F	50%RH; ISO 11403-1/-2
	5.26 MPa	763 psi	
	@Strain 2.77 %, Temperature 90.0 °C	@Strain 2.77 %, Temperature 194 °F	DAM; ISO 11403-1/-2
	5.37 MPa	779 psi	
	@Strain 0.240 %, Temperature -40.0 °C	@Strain 0.240 %, Temperature -40.0 °F	DAM; ISO 11403-1/-2
	6.13 MPa	889 psi	
	@Strain 18.49 %, Temperature 150 °C	@Strain 18.49 %, Temperature 302 °F	50%RH; ISO 11403-1/-2
	6.43 MPa	933 psi	
	@Strain 18.66 %, Temperature 150 °C	@Strain 18.66 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	6.87 MPa	996 psi	
	@Strain 34.43 %, Temperature 150 °C	@Strain 34.43 %, Temperature 302 °F	50%RH; ISO 11403-1/-2

Mechanical Properties	Metric 7.19 MPa	English 1040 psi	Comments
	@Strain 34.72 %, Temperature 150 °C	@Strain 34.72 %, Temperature 302 °F	DAM; ISO 11403-1/-2
	7.22 MPa	1050 psi	50%RH; ISO 11403-1/-2
	@Strain 51.35 %, Temperature 150 °C	@Strain 51.35 %, Temperature 302 °F	
	7.48 MPa	1080 psi	50%RH; ISO 11403-1/-2
	@Strain 68.02 %, Temperature 150 °C	@Strain 68.02 %, Temperature 302 °F	

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