

DuPont Performance Polymers Zytel® RS LC4601 NC010 Nylon (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Plasticized Toughened Renewably Sourced Polyamide Developed for Extrusion Zytel RS LC4601 NC010 is a flexible toughened and plasticized polyamide resin intended for 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-LC4601-NC010-Nylon-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	DAM; ISO 1183
Moisture Absorption	1.00 % @Thickness 2.00 mm	1.00 % @Thickness 0.0787 in	DAM; Sim. to ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Stress	0.260 MPa @Strain 0.200 %, Temperature 150 °C	37.7 psi @Strain 0.200 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	0.270 MPa @Strain 0.230 %, Temperature 150 °C	39.2 psi @Strain 0.230 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	0.350 MPa @Strain 0.210 %, Temperature 90.0 °C	50.8 psi @Strain 0.210 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	0.390 MPa @Strain 0.230 %, Temperature 90.0 °C	56.6 psi @Strain 0.230 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	0.510 MPa @Strain 0.210 %, Temperature 40.0 °C	74.0 psi @Strain 0.210 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	2.00 MPa @Strain 0.310 %, Temperature 23.0 °C	290 psi @Strain 0.310 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	3.32 MPa @Strain 4.49 %, Temperature 150 °C	482 psi @Strain 4.49 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	3.37 MPa	489 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 0.220 %, Temperature 0.000 °C	@Strain 0.220 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	3.95 MPa	573 psi	
	@Strain 0.220 %, Temperature 0.000 °C	@Strain 0.220 %, Temperature 32.0 °F	DAM; ISO 11403-1 -2
	4.74 MPa	687 psi	
	@Strain 0.240 %, Temperature -40.0 °C	@Strain 0.240 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2
	4.76 MPa	690 psi	
	@Strain 0.240 %, Temperature -40.0 °C	@Strain 0.240 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	4.82 MPa	699 psi	
	@Strain 10.44 %, Temperature 150 °C	@Strain 10.44 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	5.73 MPa	831 psi	
	@Strain 14.35 %, Temperature 150 °C	@Strain 14.35 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	5.80 MPa	841 psi	
	@Strain 20.99 %, Temperature 150 °C	@Strain 20.99 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	5.96 MPa	864 psi	
	@Strain 1.19 %, Temperature 40.0 °C	@Strain 1.19 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	6.16 MPa	893 psi	
	@Strain 30.21 %, Temperature 150 °C	@Strain 30.21 %, Temperature 302 °F	50%RH; ISO 11403-1 -2
	6.20 MPa	899 psi	
	@Strain 5.39 %, Temperature 90.0 °C	@Strain 5.39 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	6.70 MPa	972 psi	
	@Strain 0.520 %, Temperature 23.0 °C	@Strain 0.520 %, Temperature 73.4 °F	DAM; ISO 11403-1 -2
	6.71 MPa	973 psi	
	@Strain 28.97 %, Temperature 150 °C	@Strain 28.97 %, Temperature 302 °F	DAM; ISO 11403-1 -2
	7.09 MPa	1030 psi	
	@Strain 7.59 %, Temperature 90.0 °C	@Strain 7.59 %, Temperature 194 °F	50%RH; ISO 11403-1 -2

Mechanical Properties	Metric Pa	English	Comments
	@Strain 6.34 %, Temperature 40.0 °C	@Strain 6.34 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	9.60 MPa	1390 psi	
	@Strain 13.16 %, Temperature 90.0 °C	@Strain 13.16 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	10.39 MPa	1507 psi	
	@Strain 21.62 %, Temperature 90.0 °C	@Strain 21.62 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	11.39 MPa	1652 psi	
	@Strain 24.79 %, Temperature 90.0 °C	@Strain 24.79 %, Temperature 194 °F	DAM; ISO 11403-1 -2
	11.78 MPa	1709 psi	
	@Strain 43.21 %, Temperature 90.0 °C	@Strain 43.21 %, Temperature 194 °F	50%RH; ISO 11403-1 -2
	13.92 MPa	2019 psi	
	@Strain 15.49 %, Temperature 40.0 °C	@Strain 15.49 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	16.46 MPa	2387 psi	
	@Strain 29.92 %, Temperature 40.0 °C	@Strain 29.92 %, Temperature 104 °F	50%RH; ISO 11403-1 -2
	18.4 MPa	2670 psi	
	@Strain 12.09 %, Temperature 40.0 °C	@Strain 12.09 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	21.67 MPa	3143 psi	
	@Strain 26.87 %, Temperature 40.0 °C	@Strain 26.87 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	23.2 MPa	3360 psi	
	@Strain 45.66 %, Temperature 40.0 °C	@Strain 45.66 %, Temperature 104 °F	DAM; ISO 11403-1 -2
	23.81 MPa	3453 psi	
	@Strain 25.97 %, Temperature 23.0 °C	@Strain 25.97 %, Temperature 73.4 °F	50%RH; ISO 11403-1 -2
	24.96 MPa	3620 psi	
	@Strain 1.36 %, Temperature -40.0 °C	@Strain 1.36 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	25.3 MPa	3670 psi	
			DAM; ISO 11403-1 -2

Mechanical Properties	Metric @Strain 1.36 %, Temperature -40.0 °C	English @Strain 1.36 %, Temperature -40.0 °F	Comments
	33.08 MPa	4798 psi	DAM; ISO 11403-1 -2
	@Strain 2.19 %, Temperature 0.000 °C	@Strain 2.19 %, Temperature 32.0 °F	
	36.4 MPa	5280 psi	50%RH; ISO 11403-1 -2
	@Strain 4.17 %, Temperature 0.000 °C	@Strain 4.17 %, Temperature 32.0 °F	
	38.89 MPa	5641 psi	50%RH; ISO 11403-1 -2
	@Strain 12.77 %, Temperature 0.000 °C	@Strain 12.77 %, Temperature 32.0 °F	
	45.72 MPa	6631 psi	50%RH; ISO 11403-1 -2
	@Strain 2.83 %, Temperature -40.0 °C	@Strain 2.83 %, Temperature -40.0 °F	
	46.01 MPa	6673 psi	DAM; ISO 11403-1 -2
	@Strain 2.73 %, Temperature -40.0 °C	@Strain 2.73 %, Temperature -40.0 °F	
	48.45 MPa	7027 psi	DAM; ISO 11403-1 -2
	@Strain 6.05 %, Temperature 0.000 °C	@Strain 6.05 %, Temperature 32.0 °F	
	55.63 MPa	8068 psi	50%RH; ISO 11403-1 -2
	@Strain 4.13 %, Temperature -40.0 °C	@Strain 4.13 %, Temperature -40.0 °F	
	60.25 MPa	8739 psi	DAM; ISO 11403-1 -2
	@Strain 4.21 %, Temperature -40.0 °C	@Strain 4.21 %, Temperature -40.0 °F	
Tensile Modulus	0.750 GPa	109 ksi	DAM; ISO 527-1/-2
Flexural Modulus	0.700 GPa	102 ksi	DAM; ISO 178
Secant Modulus	0.0333 GPa	4.82 ksi	DAM; ISO 11403-1 -2
	@Strain 34.93 %, Temperature 100 °C	@Strain 34.93 %, Temperature 212 °F	
	0.0362 GPa	5.25 ksi	50%RH; ISO 11403-1 -2
	@Strain 49.84 %, Temperature 40.0 °C	@Strain 49.84 %, Temperature 104 °F	
	0.0425 GPa	6.17 ksi	50%RH; ISO 11403-1 -2
	@Strain 23.28 %, Temperature 100 °C	@Strain 23.28 %, Temperature 212 °F	
	0.0674 GPa	9.77 ksi	

Mechanical Properties	Metric	English	Comments
	@Strain 13.79 %, Temperature 100 °C	@Strain 13.79 %, Temperature 212 °F	DAM; ISO 11403-1 -2
	0.0729 GPa	10.6 ksi	DAM; ISO 11403-1 -2
	@Strain 30.23 %, Temperature 40.0 °C	@Strain 30.23 %, Temperature 104 °F	
	0.0790 GPa	11.5 ksi	50%RH; ISO 11403-1 -2
	@Strain 18.63 %, Temperature 40.0 °C	@Strain 18.63 %, Temperature 104 °F	
	0.0815 GPa	11.8 ksi	50%RH; ISO 11403-1 -2
	@Strain 8.86 %, Temperature 100 °C	@Strain 8.86 %, Temperature 212 °F	
	0.0917 GPa	13.3 ksi	50%RH; ISO 11403-1 -2
	@Strain 25.97 %, Temperature 23.0 °C	@Strain 25.97 %, Temperature 73.4 °F	
	0.116 GPa	16.8 ksi	DAM; ISO 11403-1 -2
	@Strain 4.58 %, Temperature 100 °C	@Strain 4.58 %, Temperature 212 °F	
	0.150 GPa	21.7 ksi	50%RH; ISO 11403-1 -2
	@Strain 6.34 %, Temperature 40.0 °C	@Strain 6.34 %, Temperature 104 °F	
	0.152 GPa	22.1 ksi	DAM; ISO 11403-1 -2
	@Strain 12.09 %, Temperature 40.0 °C	@Strain 12.09 %, Temperature 104 °F	
	0.170 GPa	24.7 ksi	50%RH; ISO 11403-1 -2
	@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F	
	0.180 GPa	26.1 ksi	DAM; ISO 11403-1 -2
	@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F	
	0.243 GPa	35.2 ksi	50%RH; ISO 11403-1 -2
	@Strain 0.210 %, Temperature 40.0 °C	@Strain 0.210 %, Temperature 104 °F	
	0.50084 GPa	72.642 ksi	DAM; ISO 11403-1 -2
	@Strain 1.19 %, Temperature 40.0 °C	@Strain 1.19 %, Temperature 104 °F	
	0.645 GPa	93.6 ksi	50%RH; ISO 11403-1 -2
	@Strain 0.310 %, Temperature 23.0 °C	@Strain 0.310 %, Temperature 73.4 °F	

Mechanical Properties	Metric GPa	English	Comments
	@Strain 7.93 %, Temperature -40.0 °C	@Strain 7.93 %, Temperature -40.0 °F	50%RH; ISO 11403-1 -2
	0.873 GPa	127 ksi	
	@Strain 4.17 %, Temperature 0.000 °C	@Strain 4.17 %, Temperature 32.0 °F	50%RH; ISO 11403-1 -2
	0.966 GPa	140 ksi	
	@Strain 6.93 %, Temperature -40.0 °C	@Strain 6.93 %, Temperature -40.0 °F	DAM; ISO 11403-1 -2

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