

DuPont™ Zytel® RS LC4601 BK010

NYLON RESIN

Product Information

DuPont™ Zytel® LCPA long chain polyamide resins provide an innovative and growing portfolio of flexible polymers with excellent thermal, chemical, and hydrolysis resistance. The diverse selection of Zytel® LCPA grades is targeted for a range of performance characteristics, balancing temperature resistance, flexibility and low permeation.

DuPont™ Zytel® RS LCPA resins contain between 20% and 100% renewably sourced material (by weight) derived from castor beans.

Zytel® RS LC4601 BK010 is a flexible, toughened, plasticized black polyamide resin intended for extrusion applications. It contains a minimum of 35% renewable sourced ingredient by weight.

General information	Value	Unit	Test Standard
Resin Identification	PA-IP	-	ISO 1043
Part Marking Code	PA-IP	-	ISO 11469
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	1.6 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.3 / -	%	ISO 294-4, 2577
Melt viscosity , @ 1000 sec-1, 280°C	190 / *	Pa s	ISO 11443
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	750 / 470	MPa	ISO 527-1/-2
Yield stress	34 / *	MPa	ISO 527-1/-2
Yield strain	15 / *	%	ISO 527-1/-2
Nominal strain at break	>50 / *	%	ISO 527-1/-2
Stress at 50% strain	* / 25	MPa	ISO 527-1/-2
Stress at Break, 23°C, 50mm/min	43 / -	MPa	ISO 527-1/-2
Strain at break			ISO 527-1/-2
Strain at break	* / >50	%	
50mm/min	300 / -	%	
Flexural Modulus	720 / -	MPa	ISO 178
Charpy impact strength			ISO 179/1eU
73°F	N / -	kJ/m ²	
-22°F	N / -	kJ/m ²	
Charpy notched impact strength			ISO 179/1eA
73°F	100 / -	kJ/m ²	
-40°F	16 / -	kJ/m ²	
Izod notched impact strength			ISO 180/1A
73°F	84 / -	kJ/m ²	
-40°F	15 / -	kJ/m ²	
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18°F/min	213 / *	°C	ISO 11357-1/-3
Glass transition temperature, 18°F/min	50 / 30	°C	ISO 11357-1/-2
Temp. of deflection under load			ISO 75-1/-2
260 psi	40 / *	°C	
65 psi	53 / *	°C	
Flammability	Value	Unit	Test Standard
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<100	mm/min	ISO 3795 (FMVSS 302)
Other properties	dry / cond	Unit	Test Standard
Humidity absorption, 80mil	1 / *	%	Sim. to ISO 62
Density	1030 / -	kg/m ³	ISO 1183
Extrusion	Value	Unit	Test Standard
Drying Temperature	75 - 80	°C	-
Drying Time, Dehumidified Dryer	3 - 4	h	-
Processing Moisture Content	≤0.06	%	-
Melt Temperature Optimum	235	°C	-
Melt Temperature Range	230 - 245	°C	-

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

North America

Asia Pacific

Europe/Middle East/Africa

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Characteristics

Processing	<ul style="list-style-type: none">• Injection Molding• Film Extrusion• Profile Extrusion	<ul style="list-style-type: none">• Sheet Extrusion• Other Extrusion• Coating	<ul style="list-style-type: none">• Casting
Delivery form	<ul style="list-style-type: none">• Pellets		
Additives	<ul style="list-style-type: none">• Plasticizer		
Special characteristics	<ul style="list-style-type: none">• Heat stabilized or stable to heat		
Regional Availability	<ul style="list-style-type: none">• North America• Europe	<ul style="list-style-type: none">• Asia Pacific• South and Central America	<ul style="list-style-type: none">• Near East/Africa• Global

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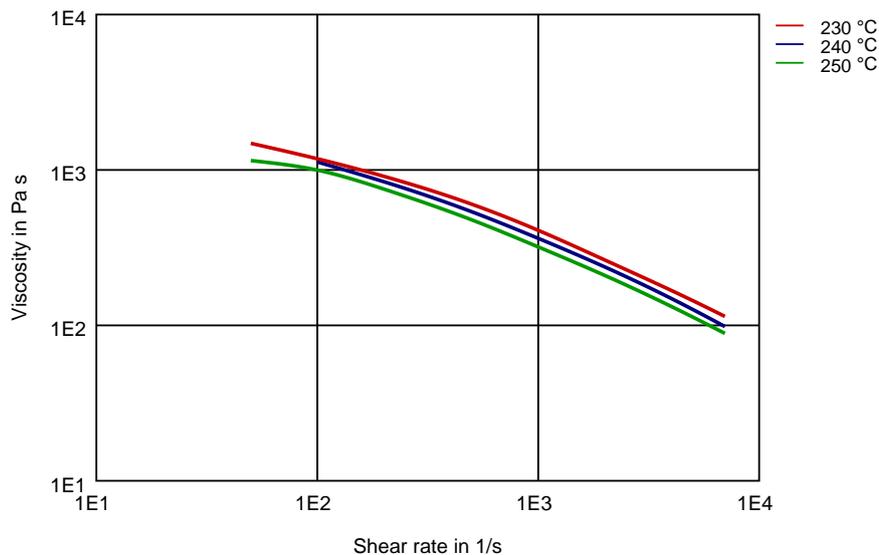


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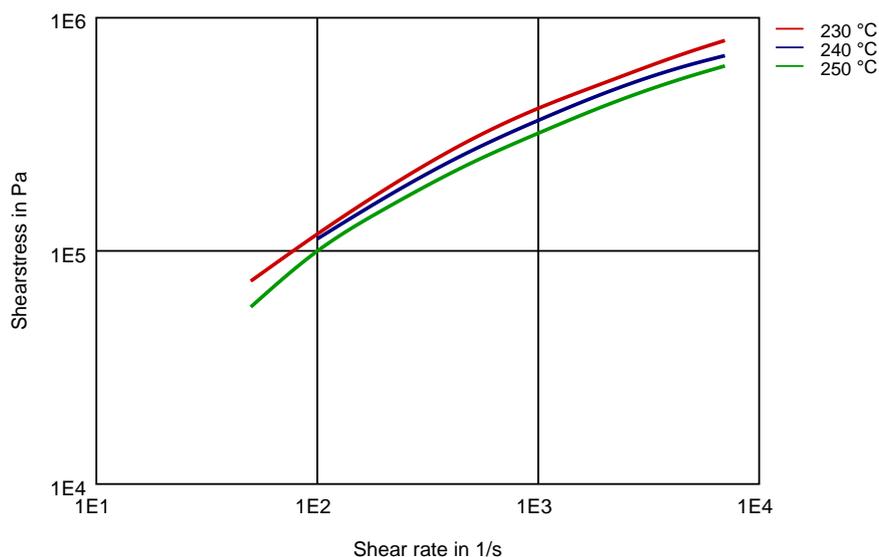
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Diagrams

Viscosity-shear rate



Shearstress-shear rate



Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties

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measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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