

DuPont™ Zytel® 77G43L BK031

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.

Zytel® 77G43L BK031 is a 43% glass fiber reinforced, black polyamide 612 resin for injection molding.

General information	Value	Unit	Test Standard
Resin Identification	PA612-GF43	-	ISO 1043
Part Marking Code	PA612-GF43	-	ISO 11469
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.3 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	12500 / -	MPa	ISO 527-1/-2
Stress at break	200 / -	MPa	ISO 527-1/-2
Strain at break	3 / -	%	ISO 527-1/-2
Flexural Modulus	11000 / -	MPa	ISO 178
Charpy notched impact strength			ISO 179/1eA
73°F	17 / -	kJ/m ²	
-40°F	16 / -	kJ/m ²	
Izod notched impact strength			ISO 180/1A
73°F	17 / -	kJ/m ²	
-40°F	15 / -	kJ/m ²	
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18°F/min	218 / *	°C	ISO 11357-1/-3
Glass transition temperature, 18°F/min	65 / 55	°C	ISO 11357-1/-2
Temp. of deflection under load			ISO 75-1/-2
260 psi	205 / *	°C	
65 psi	217 / *	°C	
Coeff. of linear therm. expansion, parallel	14 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion			ISO 11359-1/-2
normal	110 / *	E-6/K	
Normal, -40-23°C	75 / *	E-6/K	
Normal, 55-160°C	140 / *	E-6/K	
Parallel, -40-23°C	21 / *	E-6/K	
Parallel, 55-160°C	13 / *	E-6/K	
RTI, electrical			UL 746B
30mil	105 / *	°C	
60mil	120 / *	°C	
RTI, strength, 60mil	120 / *	°C	UL 746B
Flammability	dry / cond	Unit	Test Standard
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.71 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	21	mm/min	ISO 3795 (FMVSS 302)
Other properties	dry / cond	Unit	Test Standard
Humidity absorption, 80mil	0.7 / *	%	Sim. to ISO 62
Density	1420 / -	kg/m ³	ISO 1183
VDA Properties	dry / cond	Unit	Test Standard
Fogging, G-value (condensate)	0.1 / *	mg	ISO 6452

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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Injection	dry / cond	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Temperature	≥80	°C	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.2	%	-
Melt Temperature Optimum	290	°C	-
Min. melt temperature	280	°C	-
Max. melt temperature	300	°C	-
Max. screw tangential speed	0.2 / *	m/s	-
Mold Temperature Optimum	100	°C	-
Min. mold temperature	70	°C	-
Max. mold temperature	120	°C	-
Hold pressure range	50 - 100	MPa	-
Hold pressure time	3	s/mm	-
Ejection temperature	210	°C	-

Characteristics

Processing	<ul style="list-style-type: none">• Injection Molding		
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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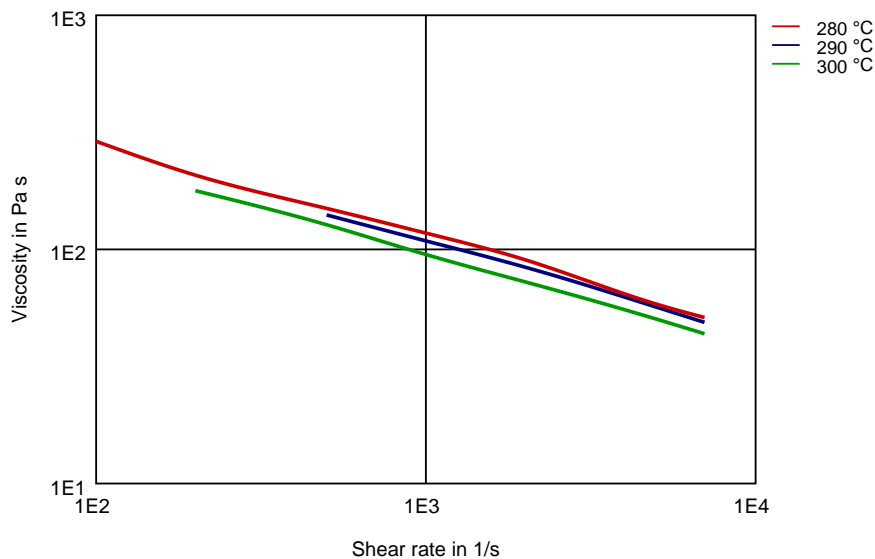


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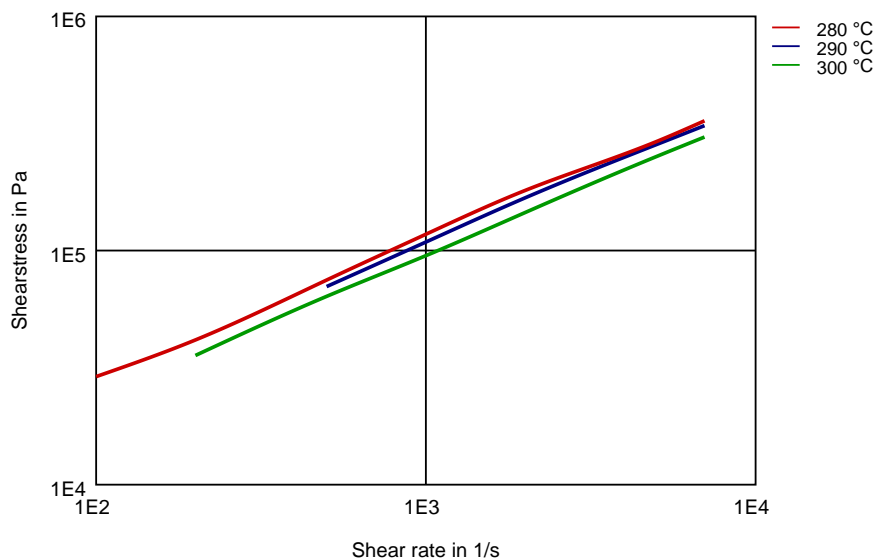
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Diagrams

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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