

DuPont™ Zytel® 79G13HSL NC010

NYLON RESIN

Product Information

ISO 1874-PA66-MGH,14-050,GF13

Common features of Zytel® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness and toughness, good high temperature performance, good electrical and flammability properties, good abrasion and chemical resistance. In addition, Zytel® nylon resins are available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses. Zytel® nylon resin, including most flame retardant grades, offer the ability to be coloured.

The good melt stability of Zytel® nylon resin normally enables the recycling of properly handled production waste. If recycling is not possible, DuPont recommends, as the preferred option, incineration with energy recovery (-31kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Zytel® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

Zytel® 79G13HSL NC010 is a 13 % glass reinforced, heat stabilized, lubricated slightly toughened black polyamide 66 for injection molding. It has improved impact resistance.

General information	Value	Unit	Test Standard
Resin Identification	PA66-IGF13	-	ISO 1043
Part Marking Code	PA66-IGF13	-	ISO 11469
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.5 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	5000 / 3700	MPa	ISO 527-1/-2
Stress at break	120 / 70	MPa	ISO 527-1/-2
Strain at break	4 / 10	%	ISO 527-1/-2
Tensile creep modulus			ISO 899-1
1h	* / 3600	MPa	
1000h	* / 3200	MPa	
Charpy impact strength			ISO 179/1eU
73°F	70 / 60	kJ/m ²	
-22°F	60 / 50	kJ/m ²	
Charpy notched impact strength			ISO 179/1eA
73°F	8 / 14	kJ/m ²	
-22°F	6 / 6	kJ/m ²	
Izod notched impact strength			ISO 180/1A
73°F	8 / 9	kJ/m ²	
-22°F	6 / 4	kJ/m ²	
Hardness, Rockwell, M-scale	90 / 74	-	ISO 2039-2
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18°F/min	263 / *	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	242 / *	°C	
65 psi	260 / *	°C	
Vicat softening temperature, 90°F/h, 11 lbf	239 / *	°C	ISO 306
Coeff. of linear therm. expansion, parallel	50 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	130 / *	E-6/K	ISO 11359-1/-2
RTI, electrical			UL 746B
30mil	105 / *	°C	
60mil	120 / *	°C	
120mil	120	°C	

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

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RTI, impact			UL 746B
30mil	65	°C	
60mil	105 / *	°C	
120mil	105	°C	
RTI, strength			UL 746B
30mil	105	°C	
60mil	120 / *	°C	
120mil	120	°C	
Flammability	dry / cond	Unit	Test Standard
Burning Behav. at 60mil nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.81 / *	mm	IEC 60695-11-10
Flammability, 3.0mm	HB / *	-	IEC 60695-11-10
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	22	mm/min	ISO 3795 (FMVSS 302)
Electrical properties	dry / cond	Unit	Test Standard
Comparative tracking index	250 / -	-	IEC 60112
Other properties	dry / cond	Unit	Test Standard
Humidity absorption, 80mil	2.2 / *	%	Sim. to ISO 62
Water absorption, 80mil	6.5 / *	%	Sim. to ISO 62
Density	1210 / -	kg/m ³	ISO 1183
Density of melt	1040	kg/m ³	-
VDA Properties	dry / cond	Unit	Test Standard
Emission of organic compounds	13	µgC/g	VDA 277
Odor test	4 ^[1]	class	VDA 270
Fogging, G-value (condensate)	0.3 / *	mg	ISO 6452
1: C3			
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	295	°C	-
Min. melt temperature	285	°C	-
Max. melt temperature	305	°C	-
Max. screw tangential speed	0.2 / *	m/s	-
Mold Temperature Optimum	80	°C	-
Min. mold temperature	50	°C	-
Max. mold temperature	100	°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
Delivery form	<ul style="list-style-type: none"> Pellets
Additives	<ul style="list-style-type: none"> Lubricants
Special characteristics	<ul style="list-style-type: none"> Heat stabilized or stable to heat
Regional Availability	<ul style="list-style-type: none"> Europe Near East/Africa

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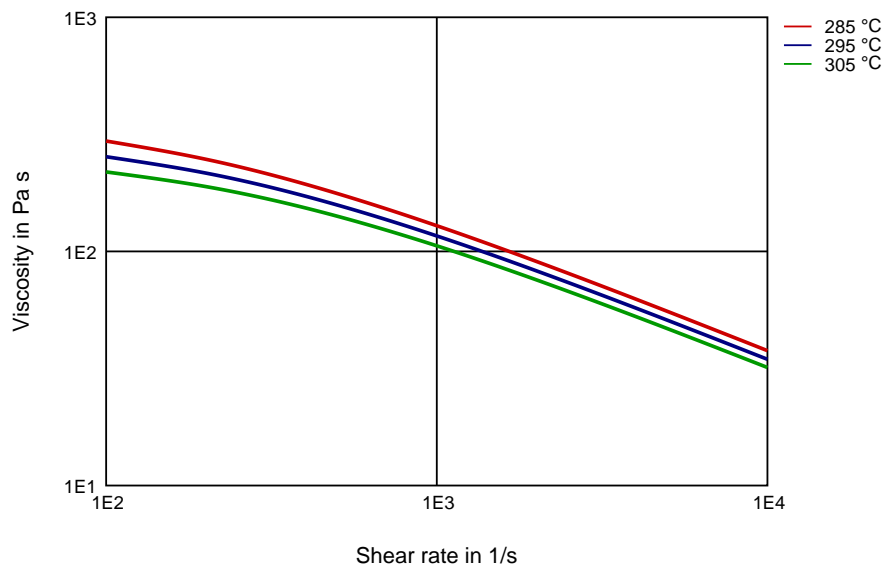
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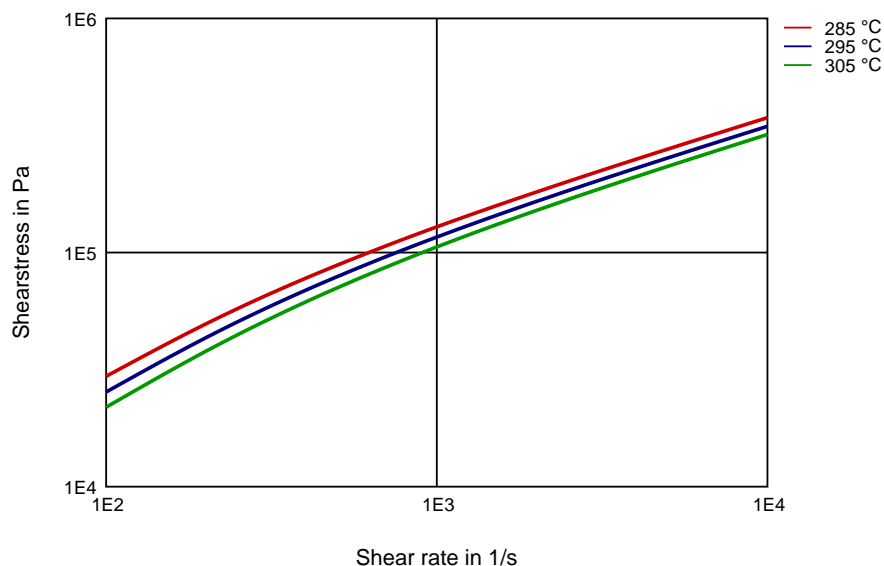
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Diagrams

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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