

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 polyamide 66 for injection molding. It has improved impact resistance.

Product 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	725190 / 536641	psi	ISO 527-1/-2
Stress at break	17400 / 10200	psi	ISO 527-1/-2
Strain at break	4 / 10	%	ISO 527-1/-2
Tensile creep modulus			ISO 899-1
1h	* / 522000	psi	
1000h	* / 464000	psi	
Charpy impact strength			ISO 179/1eU
73°F	33.3 / 28.5	ftlb/in ²	
-22°F	28.5 / 23.8	ftlb/in ²	
Charpy notched impact strength			ISO 179/1eA
73°F	3.81 / 6.66	ftlb/in ²	
-22°F	2.85 / 2.85	ftlb/in ²	
Izod notched impact strength			ISO 180/1A
73°F	3.81 / 4.28	ftlb/in ²	
-22°F	2.85 / 1.9	ftlb/in ²	
Hardness, Rockwell, M-scale	90 / 74	-	ISO 2039-2
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18°F/min	505 / *	°F	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	468 / *	°F	
65 psi	500 / *	°F	
Vicat softening temperature, 90°F/h, 11 lbf	462 / *	°F	ISO 306
Coeff. of linear therm. expansion, parallel	2.78E-5 / *	in/in/°F	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	7.22E-5 / *	in/in/°F	ISO 11359-1/-2
Spec. heat capacity solid	1130	J/(kg K)	- DS
Spec. heat capacity of melt	2140	J/(kg K)	-
RTI, electrical			UL 746B
30mil	221	°F	
60mil	248	°F	
120mil	248	°F	

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

North America

Tel: +1 302 999-4592

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Asia Pacific

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RTI, impact			UL 746B
30mil	149	°F	
60mil	221	°F	
120mil	221	°F	
RTI, strength			UL 746B
30mil	221	°F	
60mil	248 / *	°F	
120mil	248	°F	

DS: Derived from similar grade

Flammability	dry / cond	Unit	Test Standard
Burning Behav. at 60mil nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.0591 / *	in	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.0315 / *	in	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	0.866	in/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	1.21 / -	g/cm ³	ISO 1183
Density of melt	64.9	lb/ft 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	≥176	°F	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.2	%	-
Melt Temperature Optimum	563	°F	-
Min. melt temperature	545	°F	-
Max. melt temperature	581	°F	-
Max. screw tangential speed	0.2 / *	m/s	-
Mold Temperature Optimum	176	°F	-
Min. mold temperature	122	°F	-
Max. mold temperature	212	°F	-
Hold pressure range	7250 - 14500	psi	-
Hold pressure time	0.0762	s/mil	-
Ejection temperature	410	°F	-

Characteristics

Processing	• Injection Molding
Delivery form	• Pellets
Additives	• Lubricants
Special characteristics	• Heat stabilized or stable to heat
Regional Availability	• Europe • Near East/Africa

Revised: 2019-03-22

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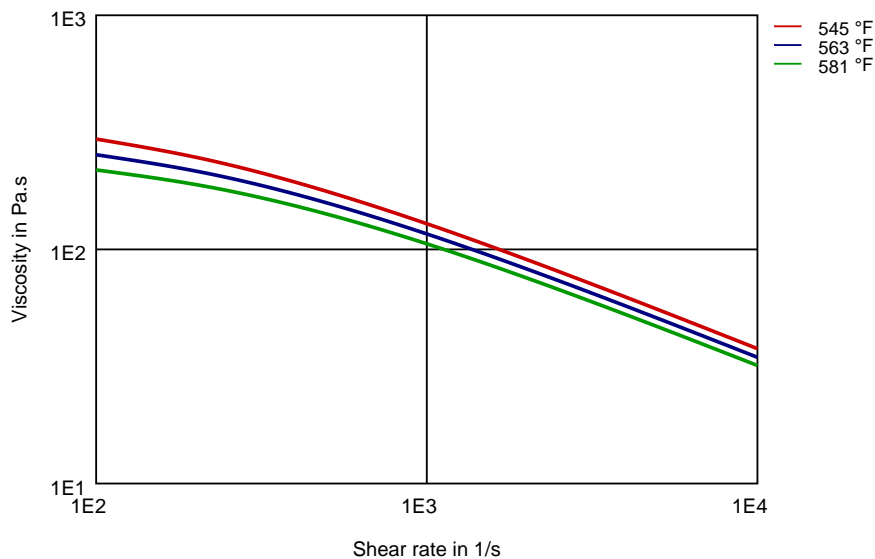
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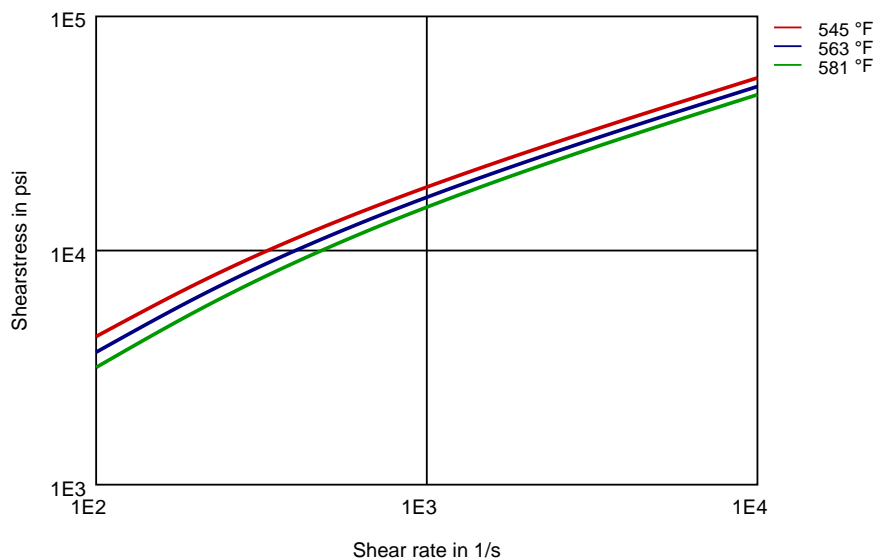
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Diagrams

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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