

DuPont™ Zytel® FN727 NC010A

NYLON RESIN

Product Information

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® FN727 NC010A is an impact modified, plasticizer free, very flexible polyamide 6 alloy resin having good low temperature toughness, good heat aging and good chemical resistance. Uses include cable jacketing, hose and tube applications.

General information	Value	Unit	Test Standard
Resin Identification	PA6-F	-	ISO 1043
Part Marking Code	PA6-F	-	ISO 11469
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.8 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	130534 / 47862.5	psi	ISO 527-1/-2
Stress at 50% strain	4060 / 2320	psi	ISO 527-1/-2
Strain at break	>50 / >50	%	ISO 527-1/-2
Flexural Modulus	131000 / -	psi	ISO 178
Charpy notched impact strength			ISO 179/1eA
73 °F	61.8 / -	ftlb/in ²	
-22 °F	30.9 / -	ftlb/in ²	
Izod notched impact strength, 73 °F	N / -	ftlb/in ²	ISO 180/1A
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18 °F/min	430 / *	°F	ISO 11357-1/-3
Glass transition temperature, 18 °F/min	131 / 50	°F	ISO 11357-1/-2
Temp. of deflection under load			ISO 75-1/-2
260 psi	118 / *	°F	
65 psi	131 / *	°F	
Thermal conductivity of melt	0.16	W/(m K)	-
Spec. heat capacity of melt	2700	J/(kg K)	-
Flammability	Value	Unit	Test Standard
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<100	in/min	ISO 3795 (FMVSS 302)
Other properties	dry / cond	Unit	Test Standard
Humidity absorption, 80mil	1.4 / *	%	Sim. to ISO 62
Density	1.02 / -	g/cm ³	ISO 1183
Density of melt	54.3	lb/ft ³	-
Injection	Value	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.1	%	-
Melt Temperature Optimum	500	°F	-
Min. melt temperature	482	°F	-
Max. melt temperature	536	°F	-
Min. mold temperature	104	°F	-
Max. mold temperature	176	°F	-

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

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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">• Blow Molding
Delivery form	<ul style="list-style-type: none">• Pellets		
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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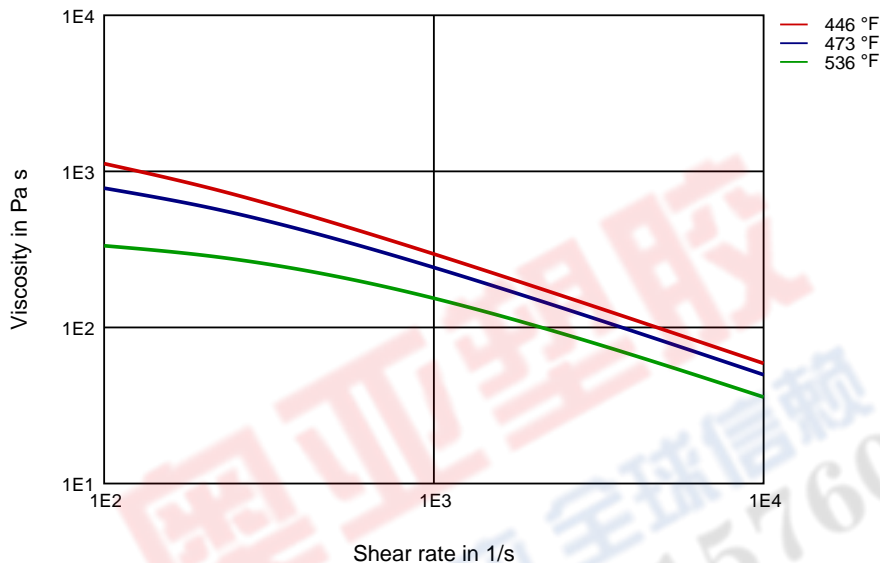


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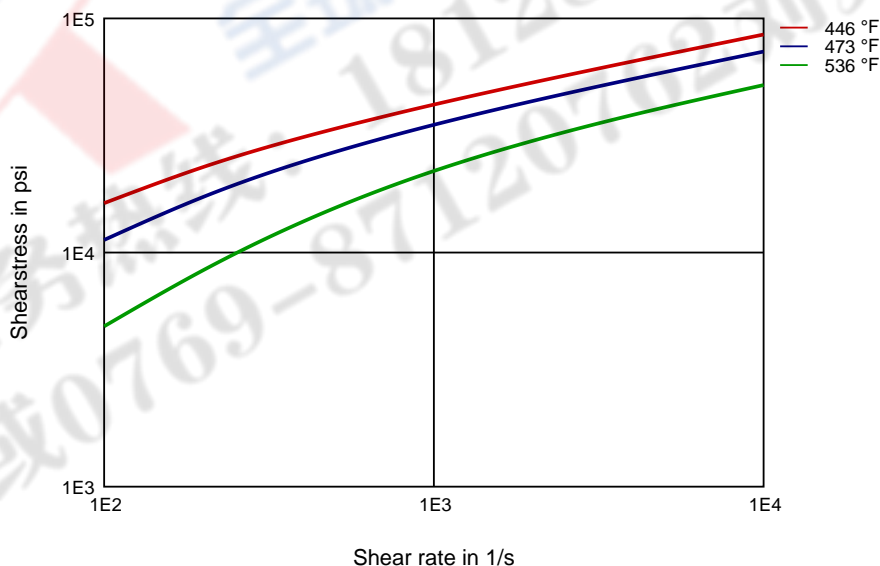
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Diagrams

Viscosity-shear rate



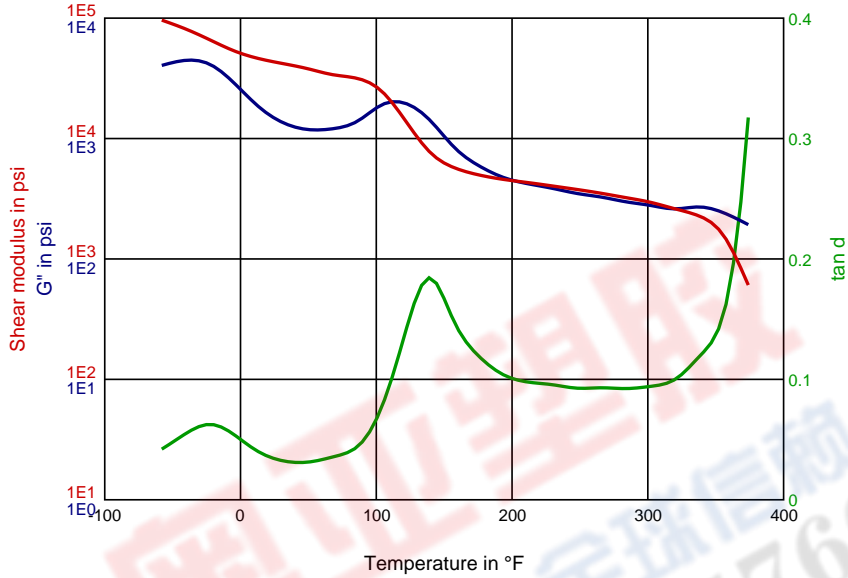
Shearstress-shear rate



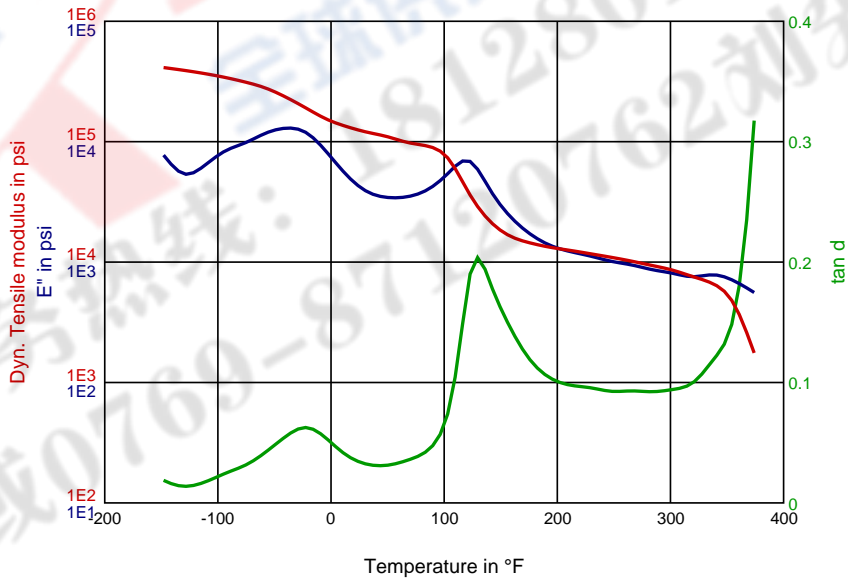
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Dynamic Shear modulus-temperature (dry)



Dynamic Tensile modulus-temperature (dry)



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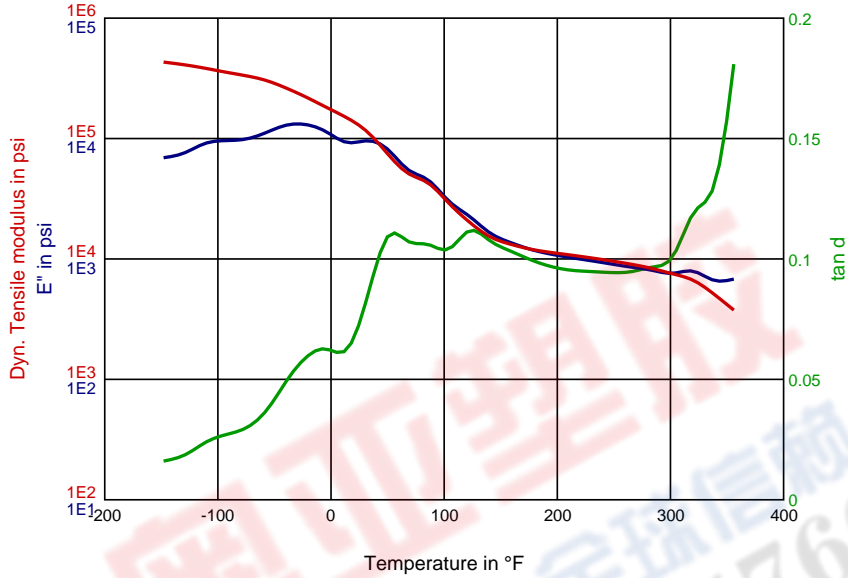
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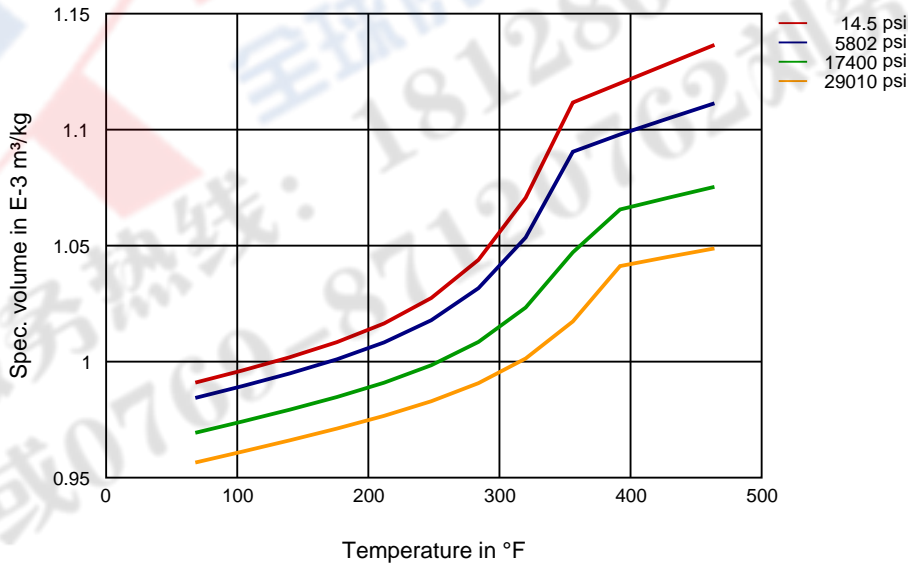
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Dynamic Tensile modulus-temperature (cond.)



Specific volume-temperature (pvT)



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

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