

DuPont™ Zytel® PLS95G40DH1T BK261

ZYTEL® PLUS 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® PLS95G40DH1T is a 40% GR impact modified PA, made with SHIELD technology, its superior heat & oil resistance combined with the "stone impact resistance" makes it ideal choice for use in severe environments exposed to heat and oil.

General information	Value	Unit	Test Standard
Resin Identification	PA66/6T-IGF40	-	ISO 1043
Part Marking Code	PA66/6T-IGF40	-	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	11300 / -	MPa	ISO 527-1/-2
Stress at break	175 / -	MPa	ISO 527-1/-2
Strain at break	4 / -	%	ISO 527-1/-2
Flexural Modulus	10000 / -	MPa	ISO 178
Flexural Strength	277 / -	MPa	ISO 178
Charpy impact strength, 73°F	105 / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength			ISO 179/1eA
73°F	21 / -	kJ/m ²	
-40°F	16 / -	kJ/m ²	
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18°F/min	263 / *	°C	ISO 11357-1/-3
Coeff. of linear therm. expansion, parallel	14 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion normal	91 / *	E-6/K	ISO 11359-1/-2
Normal, -40-23°C	81 / *	E-6/K	
Normal, 55-160°C	120 / *	E-6/K	
Parallel, -40-23°C	18 / *	E-6/K	
Parallel, 55-160°C	4 / *	E-6/K	
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
Density	1430 / -	kg/m ³	ISO 1183
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	-



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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	• Injection Molding		
Delivery form	• Pellets		
Additives	• Release agent		
Special characteristics	• Heat stabilized or stable to heat		
Regional Availability	• North America • Europe	• Asia Pacific • South and Central America	• Near East/Africa • Global

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

North America

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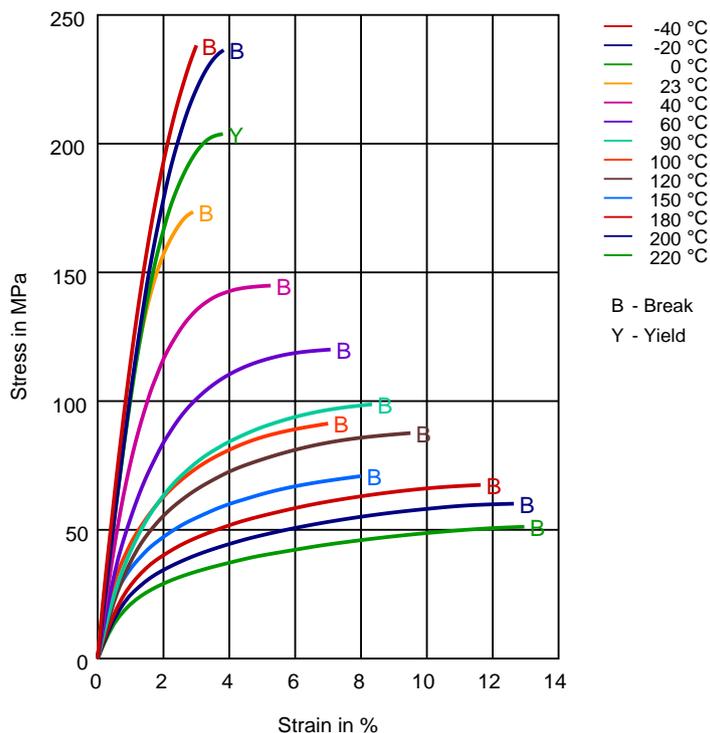


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Diagrams

Stress-strain (dry)



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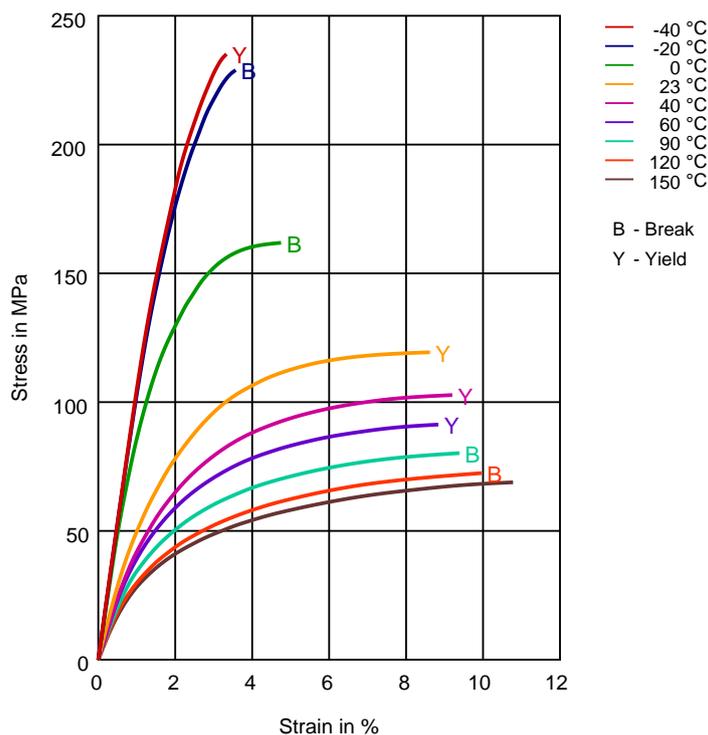
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Stress-strain (cond.)



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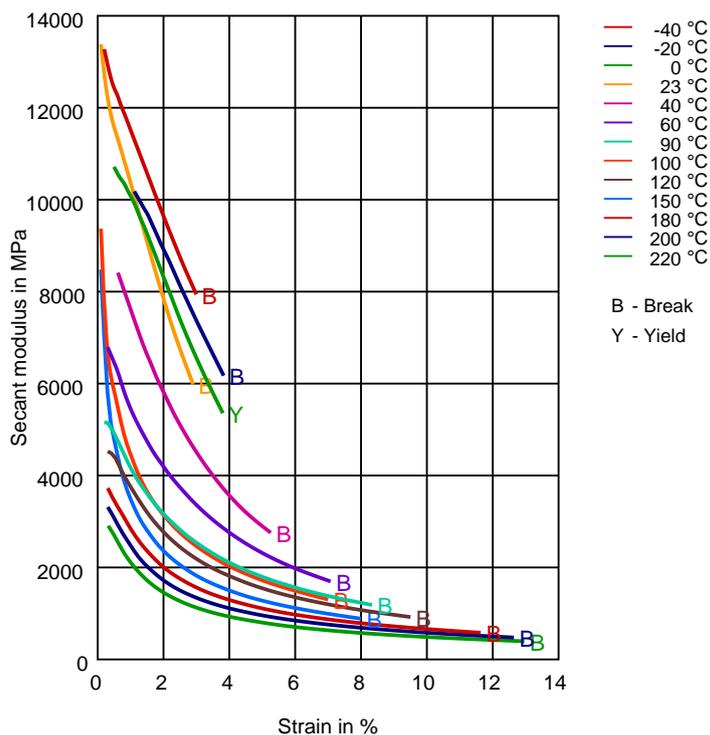
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ZYTEL® PLUS NYLON RESIN

Secant modulus-strain (dry)



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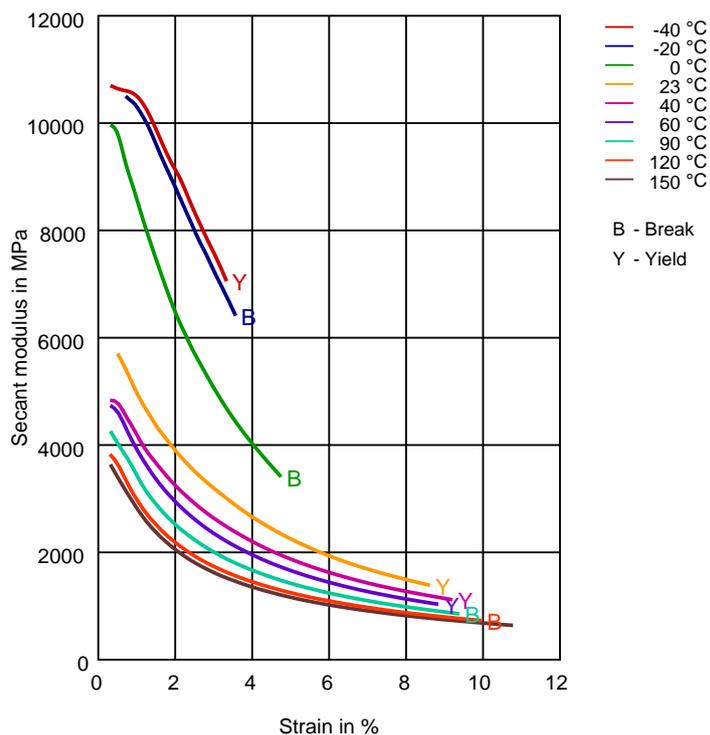
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Secant modulus-strain (cond.)



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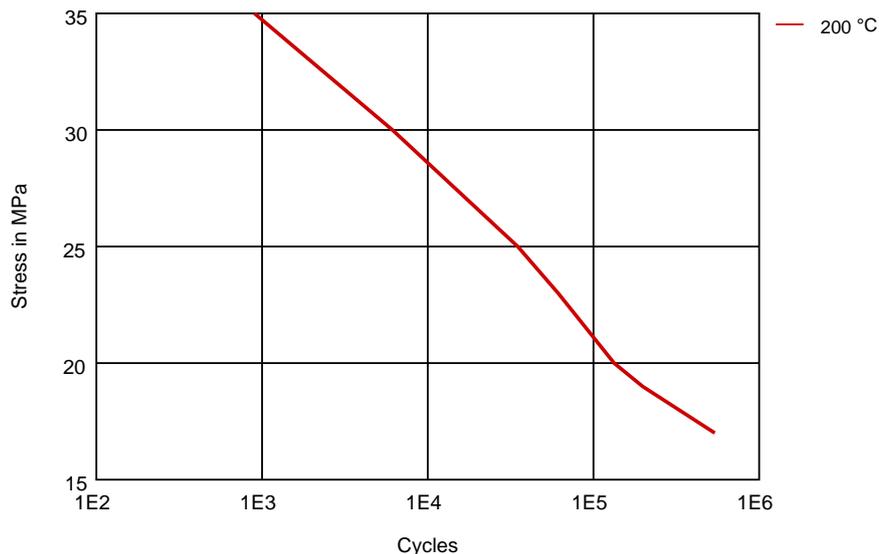
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Tensile Fatigue, 10Hz, R=0.1 mm(dry)



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Chemical Media Resistance

Mineral oils

- ✓ SAE 10W40 multigrade motor oil (130°C)

Standard Fuels

- ✓ ISO 1817 Liquid 1 - E5 (60°C)
- ✓ ISO 1817 Liquid 2 - M15E4 (60°C)
- ✓ ISO 1817 Liquid 3 - M3E7 (60°C)
- ✓ ISO 1817 Liquid 4 - M15 (60°C)
- ✓ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- ✓ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- ✓ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)
- ✗ Diesel fuel (pref. ISO 1817 Liquid F) (90°C)
- ✗ Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)

Salt solutions

- ✗ Zinc Chloride solution (50% by mass) (23°C)

Other

- ✗ Water (90°C)
- ✗ Coolant Glysantin G48, 1:1 in water (125°C)

Symbols used:

- ✓ possibly resistant

Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

- ✗ not recommended - see explanation

Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

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 (Hytre® 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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