

# DuPont™ Zytel® PLS95G50DH2 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® PLS95G50DH2 BK261 is a high flow 50% glass reinforced PA nylon resin using SHIELD Technology, only from DuPont providing exceptional Heat Resistance & High stiffness for automotive under hood applications like charge air cooler caps.**

General information	Value	Unit	Test Standard
Resin Identification	PA66/6T-GF50	-	ISO 1043
Part Marking Code	PA66/6T-GF50	-	ISO 11469
Rheological properties	dry / cond	Unit	Test Standard
Viscosity number	125 <sup>(1)</sup> / *	cm <sup>3</sup> /g	ISO 307, 1157, 1628
Molding shrinkage, parallel	0.3 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6 / -	%	ISO 294-4, 2577
1: sulphuric acid 96%			
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	17000 / 12000	MPa	ISO 527-1/-2
Stress at break	240 / 170	MPa	ISO 527-1/-2
Strain at break	2.6 / 4	%	ISO 527-1/-2
Flexural Modulus	16000 / -	MPa	ISO 178
Flexural Strength	370 / -	MPa	ISO 178
Tensile creep modulus			ISO 899-1
1h	* / 10000	MPa	
1000h	* / 6500	MPa	
Charpy impact strength			ISO 179/1eU
73°F	90 / 95	kJ/m <sup>2</sup>	
-22°F	80 / 80	kJ/m <sup>2</sup>	
Charpy notched impact strength			ISO 179/1eA
73°F	15 / 20	kJ/m <sup>2</sup>	
-22°F	16 / -	kJ/m <sup>2</sup>	
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18°F/min	267 / *	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	254 / *	°C	
65 psi	263 / *	°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	67 / *	E-6/K	
Normal, -40-23°C	56 / *	E-6/K	
Normal, 55-160°C	120 / *	E-6/K	
Parallel, -40-23°C	15 / *	E-6/K	
Parallel, 55-160°C	5 / *	E-6/K	
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
FMVSS Class	B	-	ISO 3795 (FMVSS 302)

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

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Burning rate, Thickness 1 mm	42	mm/min	ISO 3795 (FMVSS 302)
Other properties	dry / cond	Unit	Test Standard
Humidity absorption, 80mil	1.3 / *	%	Sim. to ISO 62
Water absorption, 80mil	4.5 / *	%	Sim. to ISO 62
Density	1590 / -	kg/m <sup>3</sup>	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	-
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	-

### Characteristics

Processing	<ul style="list-style-type: none"> <li>• Injection Molding</li> </ul>		
Delivery form	<ul style="list-style-type: none"> <li>• Pellets</li> </ul>		
Additives	<ul style="list-style-type: none"> <li>• Release agent</li> </ul>		
Special characteristics	<ul style="list-style-type: none"> <li>• Heat stabilized or stable to heat</li> </ul>		
Regional Availability	<ul style="list-style-type: none"> <li>• North America</li> <li>• Europe</li> </ul>	<ul style="list-style-type: none"> <li>• Asia Pacific</li> <li>• South and Central America</li> </ul>	<ul style="list-style-type: none"> <li>• Near East/Africa</li> <li>• Global</li> </ul>

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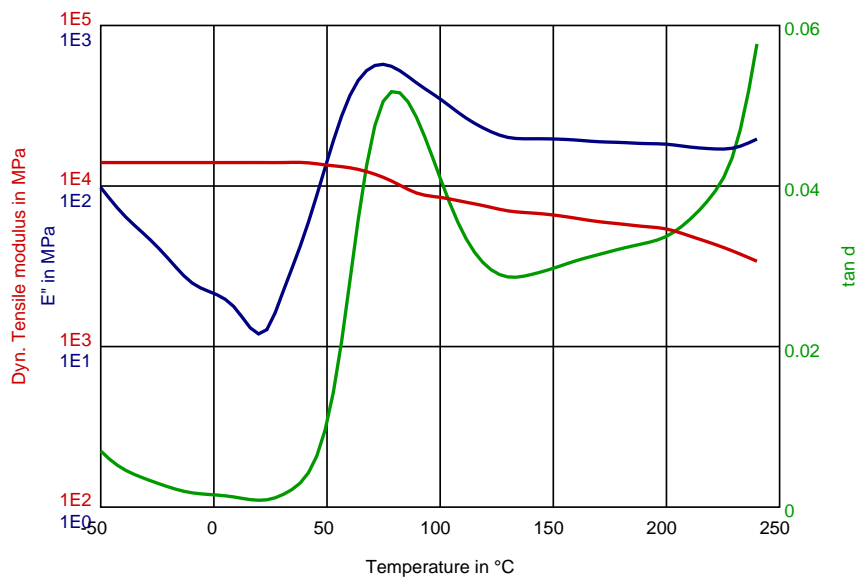


# DuPont™ Zytel® PLS95G50DH2 BK261

## ZYTEL® PLUS NYLON RESIN

Diagrams

Dynamic Tensile modulus-temperature (dry)



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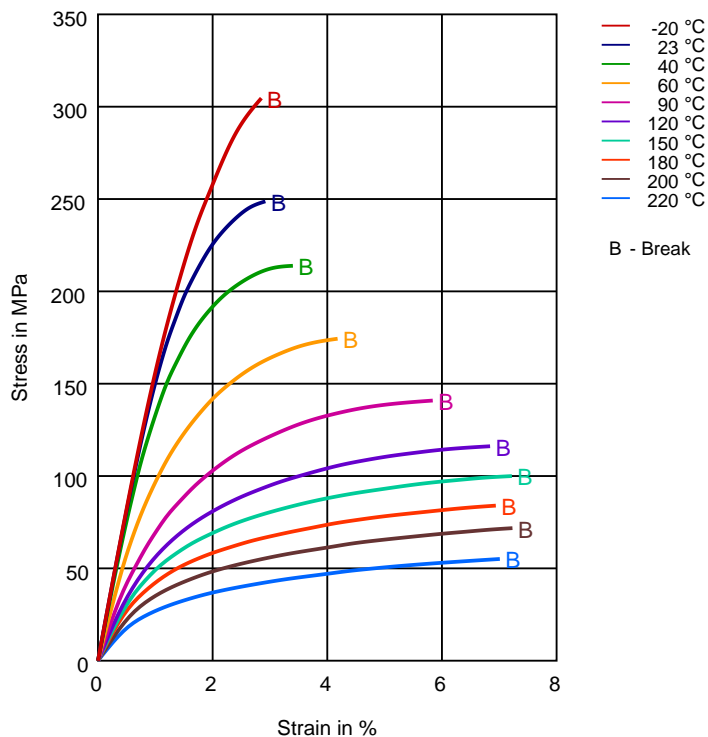
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# DuPont™ Zytel® PLS95G50DH2 BK261

## ZYTEL® PLUS NYLON RESIN

Stress-strain (dry)



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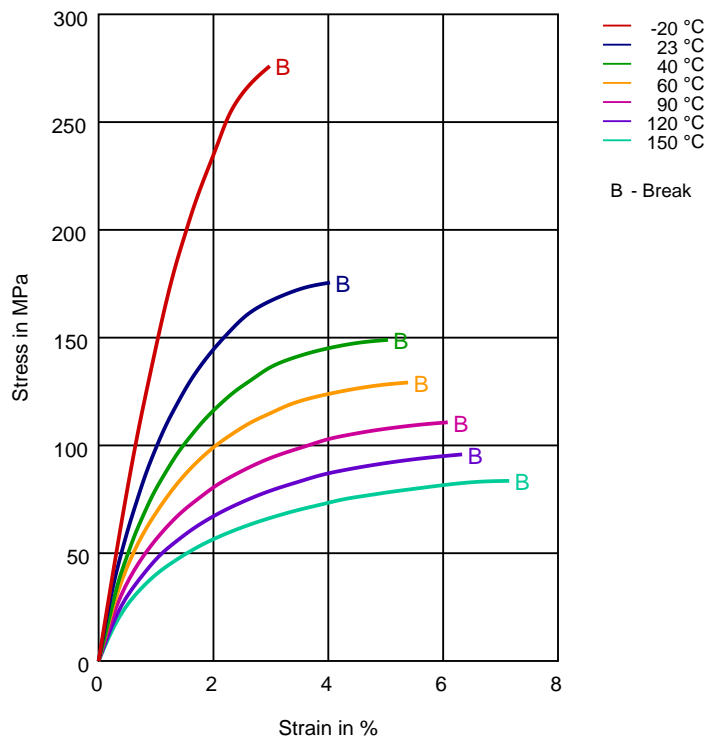
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# DuPont™ Zytel® PLS95G50DH2 BK261

## ZYTEL® PLUS NYLON RESIN

Stress-strain (cond.)



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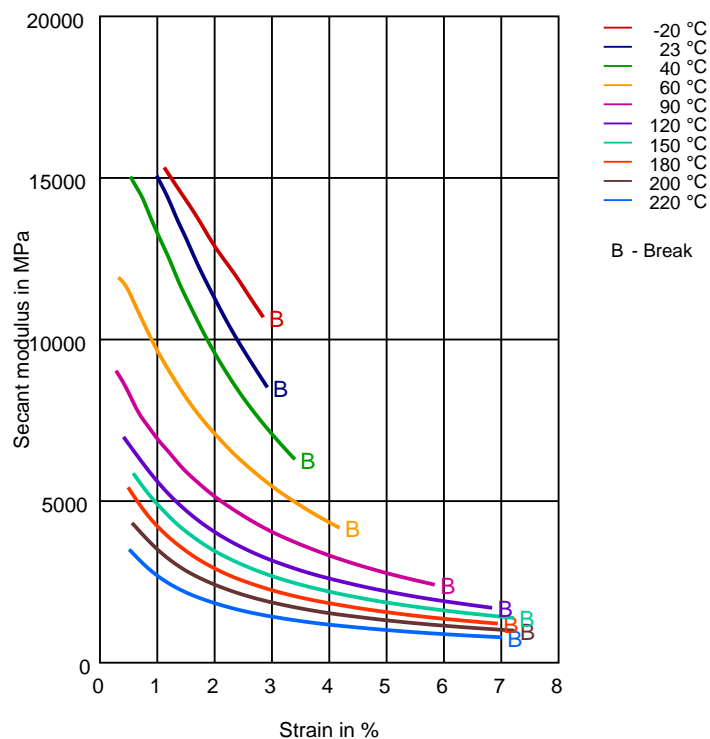
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# DuPont™ Zytel® PLS95G50DH2 BK261

## ZYTEL® PLUS NYLON RESIN

Secant modulus-strain (dry)



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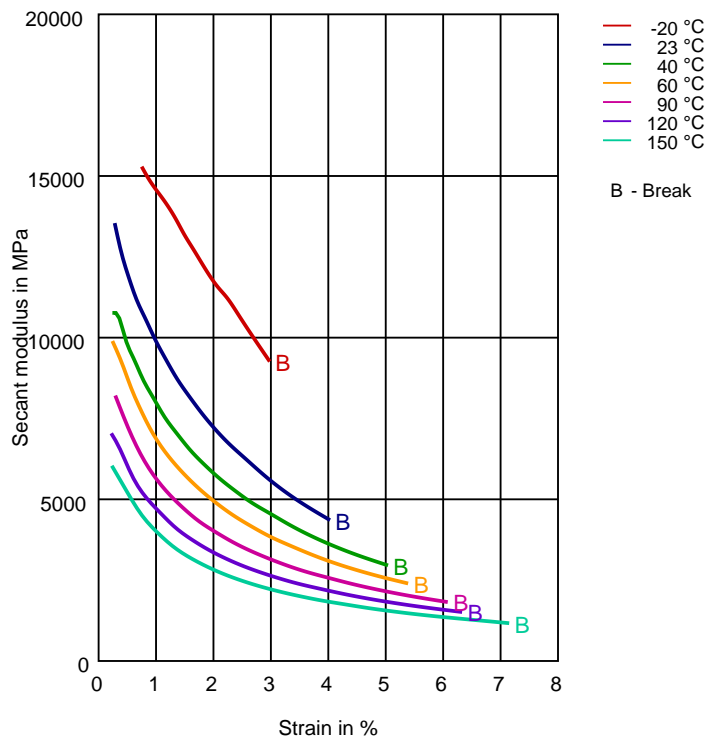
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## ZYTEL® PLUS NYLON RESIN

Secant modulus-strain (cond.)



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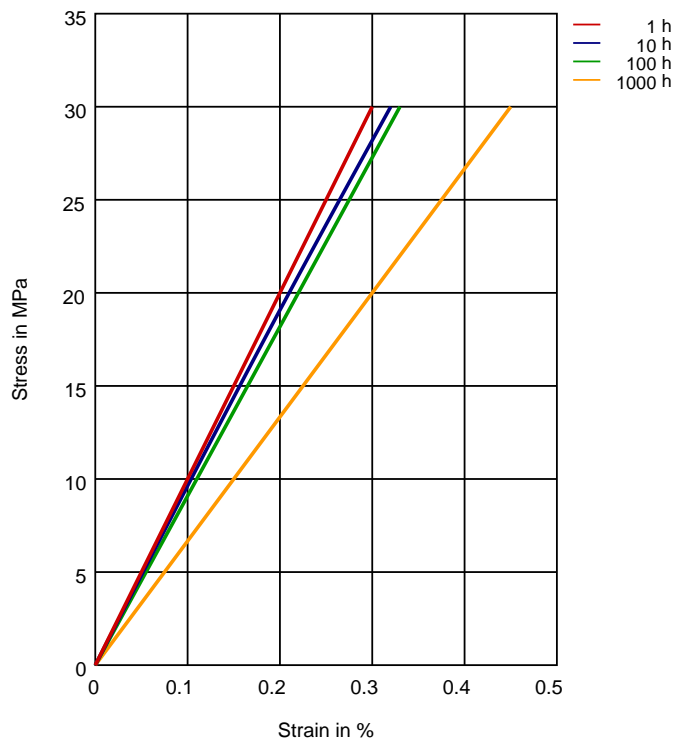
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# DuPont™ Zytel® PLS95G50DH2 BK261

## ZYTEL® PLUS NYLON RESIN

Stress-strain (isochronous) 23°C(cond.)



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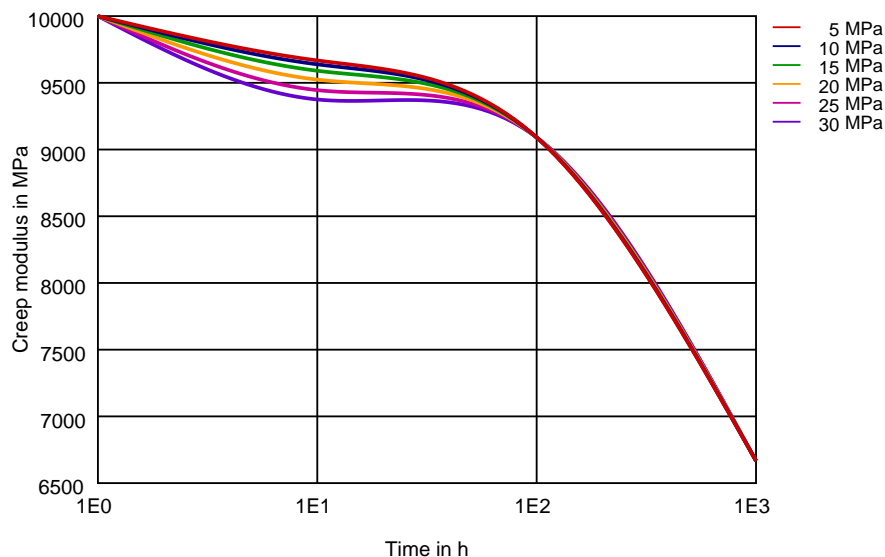




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## ZYTEL® PLUS NYLON RESIN

Creep modulus-time 23 °C(cond.)



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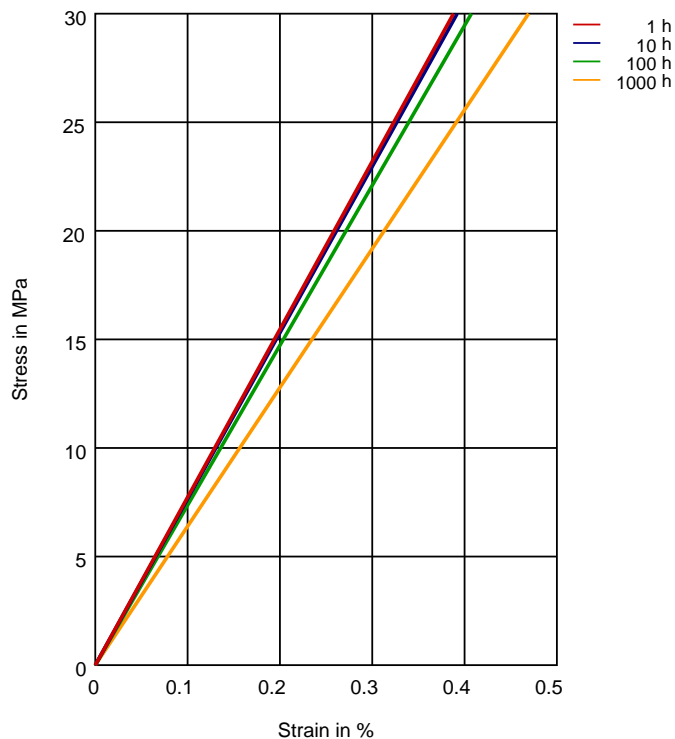
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# DuPont™ Zytel® PLS95G50DH2 BK261

## ZYTEL® PLUS NYLON RESIN

Stress-strain (isochronous) 100°C (dry)



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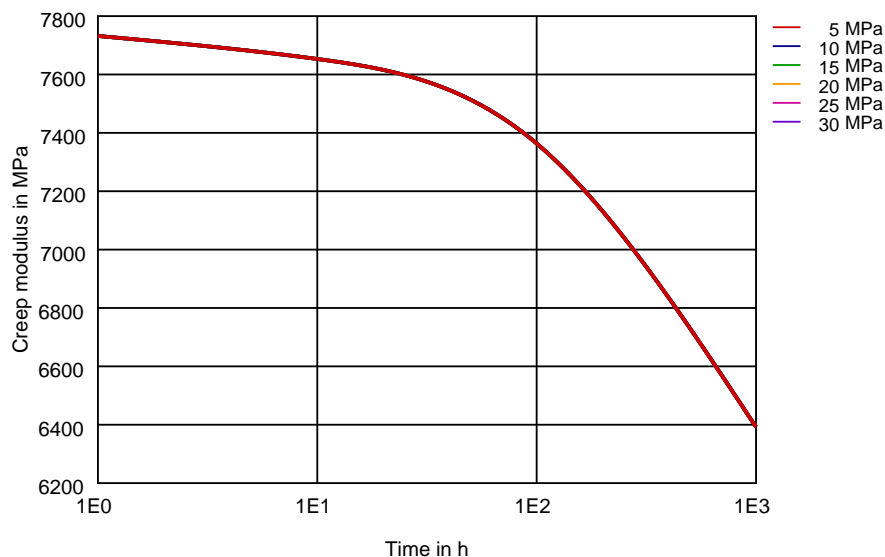
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## ZYTEL® PLUS NYLON RESIN

Creep modulus-time 100°C (dry)



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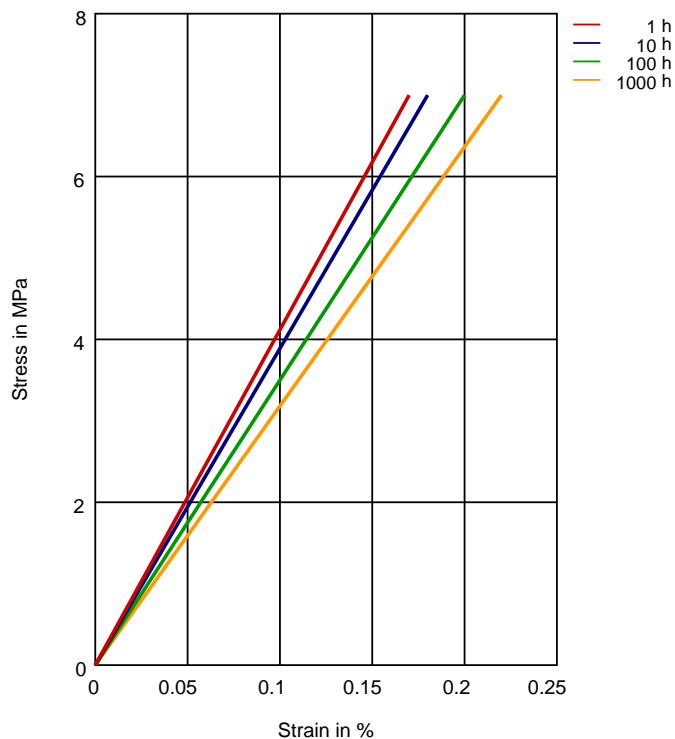
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# DuPont™ Zytel® PLS95G50DH2 BK261

## ZYTEL® PLUS NYLON RESIN

Stress-strain (isochronous) 200°C (dry)



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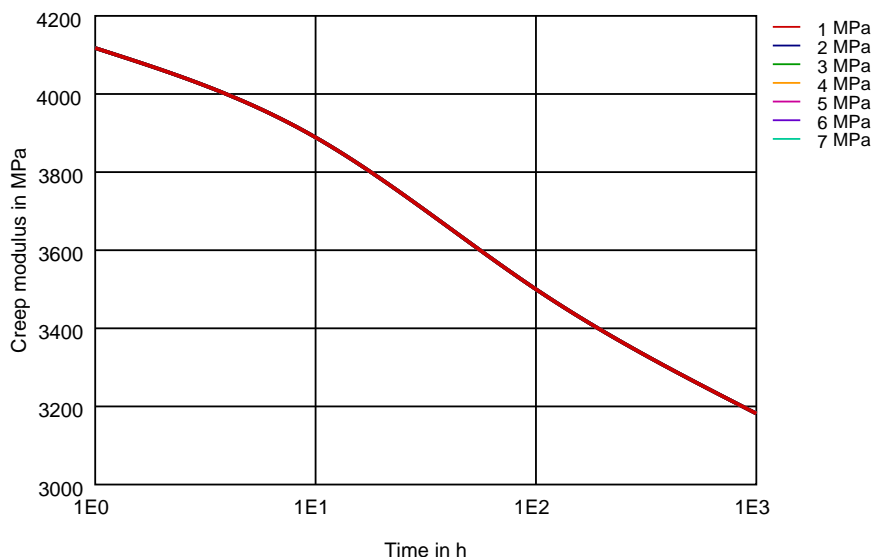
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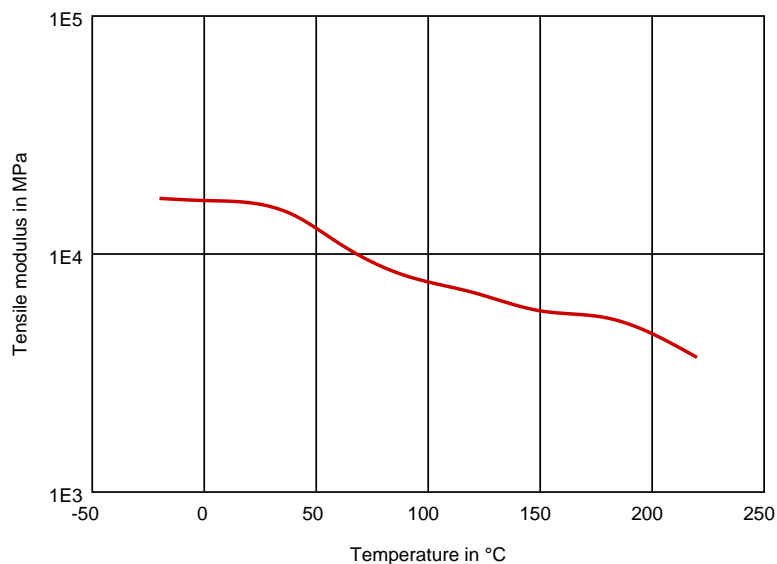
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## ZYTEL® PLUS NYLON RESIN

Creep modulus-time 200°C (dry)



Tensile modulus-temperature (dry)



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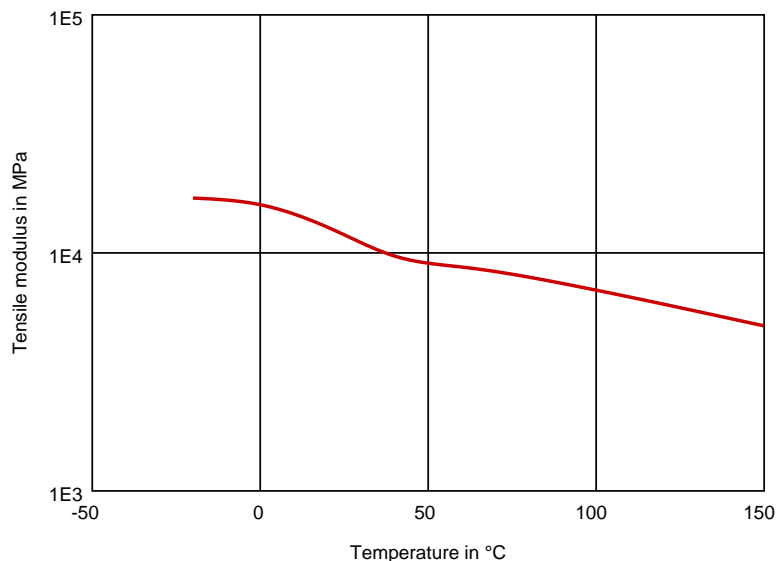
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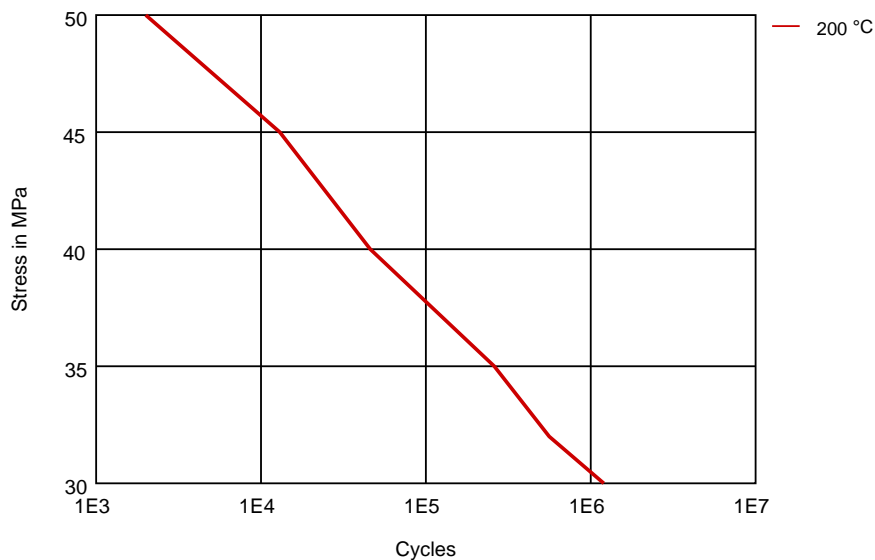
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## ZYTEL® PLUS NYLON RESIN

Tensile modulus-temperature (cond.)



Tensile Fatigue, 10Hz, R=0.1 2mm(dry)



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## ZYTEL® PLUS NYLON RESIN

### Chemical Media Resistance

#### Other

- ✓ Ethylene Glycol (50% by mass) in water (108°C)
- ✗ 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 (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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