

# DuPont™ Zytel® EFE7374 BK416

## 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® EFE7374 is a 40% fiber reinforced, heat stabilized, lubricated, toughened polyamide 6 for injection molding. It has an improved impact resistance and excellent surface appearance and gloss.**

General information	Value	Unit	Test Standard
Resin Identification	PA6-IGF40	-	ISO 1043
Part Marking Code	PA6-IGF40	-	ISO 11469
Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.2 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	12000 / 7500	MPa	ISO 527-1/-2
Stress at break	190 / 130	MPa	ISO 527-1/-2
Strain at break	3.5 / 7.5	%	ISO 527-1/-2
Charpy impact strength			ISO 179/1eU
73 °F	110 / 113	kJ/m <sup>2</sup>	
-22 °F	118 / 105	kJ/m <sup>2</sup>	
Charpy notched impact strength			ISO 179/1eA
73 °F	24 / 33	kJ/m <sup>2</sup>	
-22 °F	17 / 18	kJ/m <sup>2</sup>	
Izod notched impact strength			ISO 180/1A
73 °F	24 / 30	kJ/m <sup>2</sup>	
-22 °F	19 / 18	kJ/m <sup>2</sup>	
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 18 °F/min	221 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 260 psi	212 / *	°C	ISO 75-1/-2
Flammability	Value	Unit	Test Standard
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	33	mm/min	ISO 3795 (FMVSS 302)
Other properties	dry / cond	Unit	Test Standard
Humidity absorption, 80mil	1.7 / *	%	Sim. to ISO 62
Water absorption, 80mil	5.4 / *	%	Sim. to ISO 62
Density	1410 / -	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	270	°C	-
Min. melt temperature	260	°C	-
Max. melt temperature	280	°C	-
Max. screw tangential speed	0.2 / *	m/s	-
Mold Temperature Optimum	100	°C	-

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

North America

Asia Pacific

Europe/Middle East/Africa

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Min. mold temperature	50	°C	-
Max. mold temperature	90	°C	-
Hold pressure range	50 - 100	MPa	-
Hold pressure time	3	s/mm	-

### Characteristics

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

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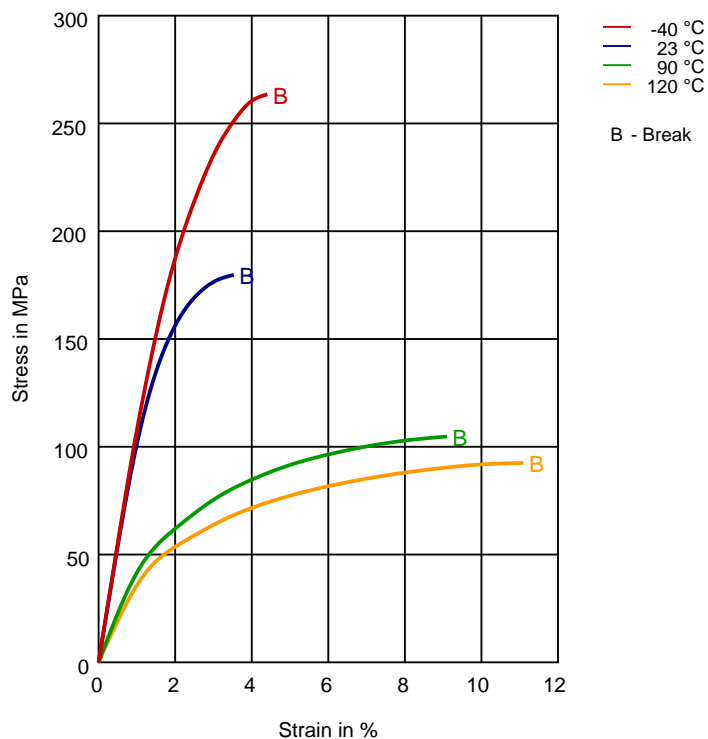


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## NYLON RESIN

Diagrams

Stress-strain (dry)



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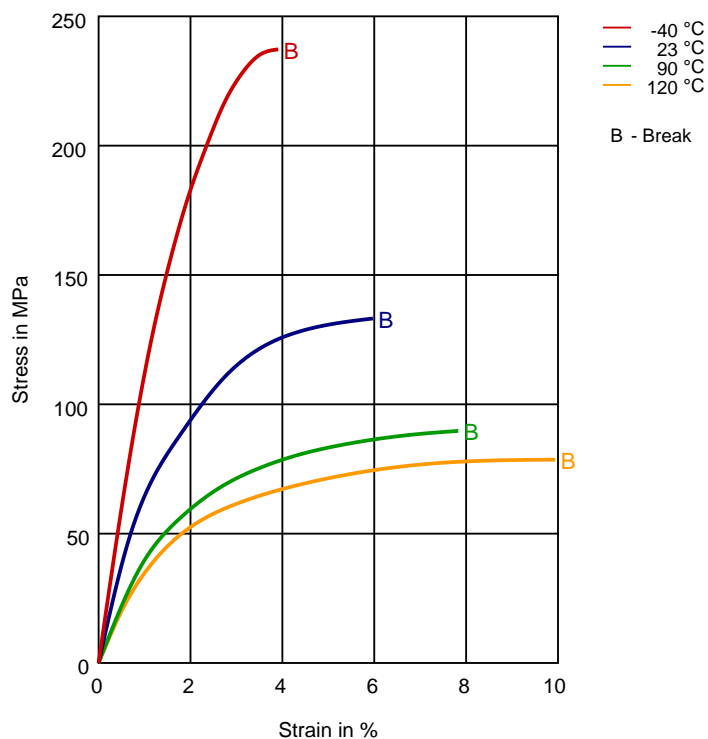
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# DuPont™ Zytel® EFE7374 BK416

## NYLON RESIN

Stress-strain (cond.)



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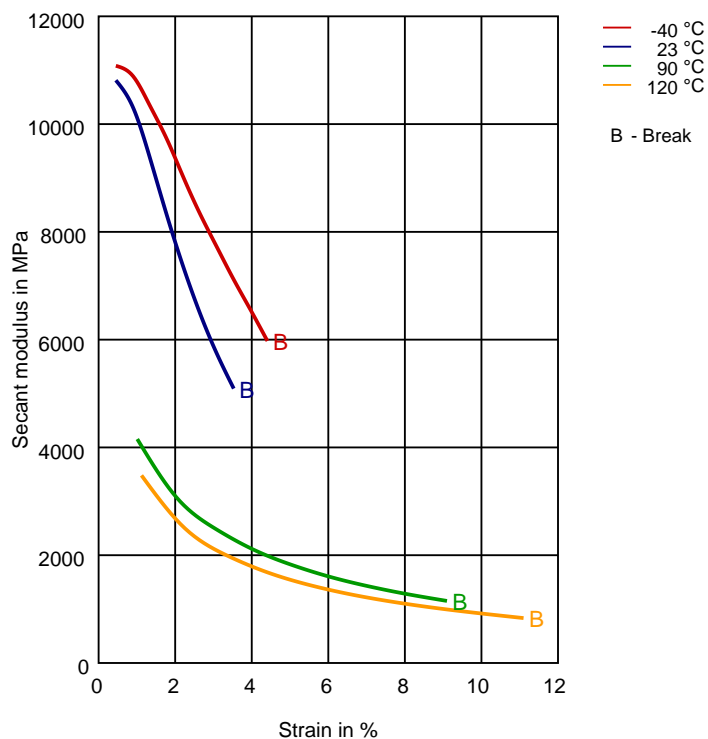
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## NYLON RESIN

Secant modulus-strain (dry)



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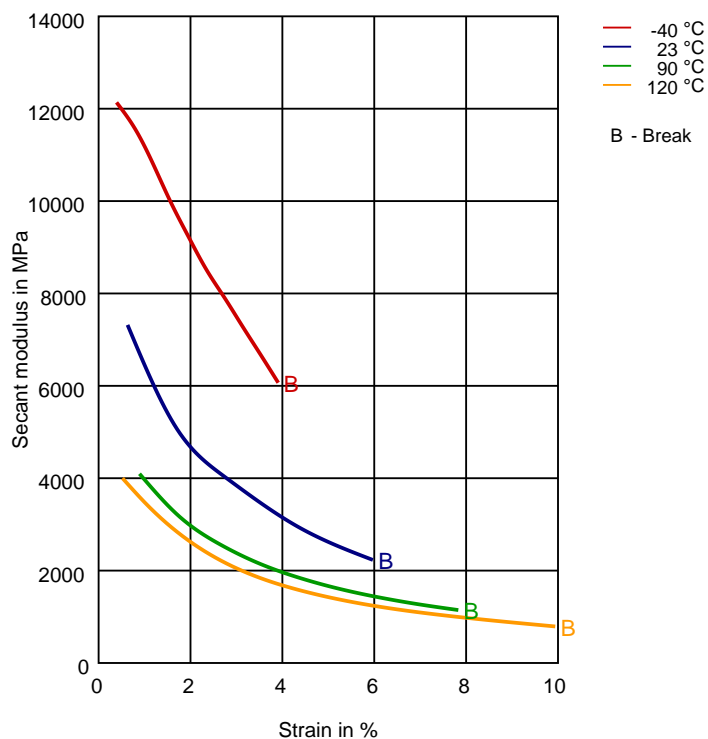
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# DuPont™ Zytel® EFE7374 BK416

## NYLON RESIN

Secant modulus-strain (cond.)



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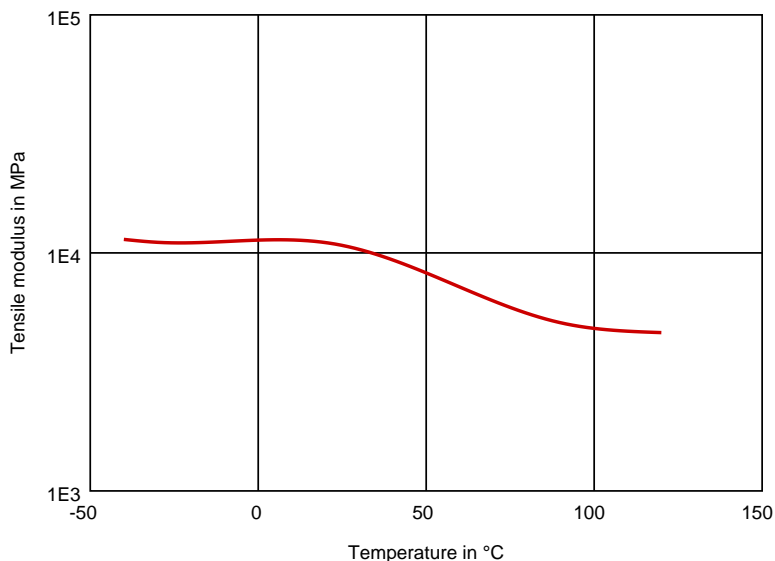
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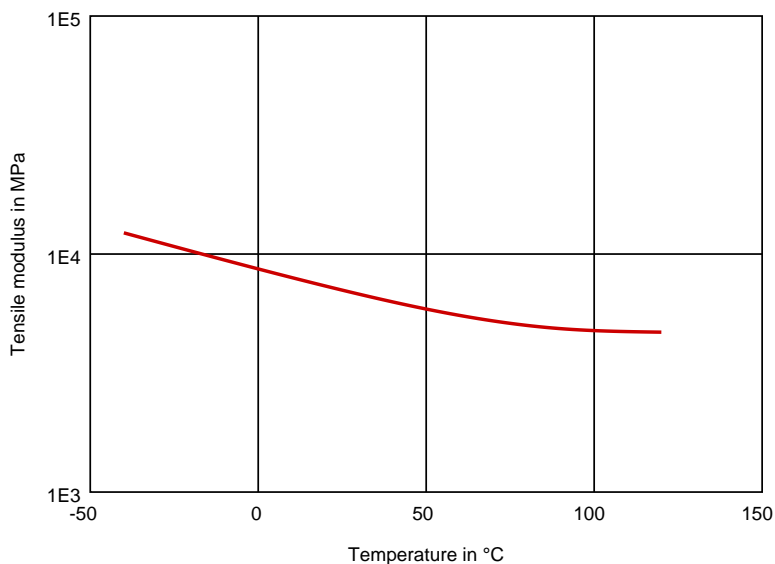


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Tensile modulus-temperature (dry)



Tensile modulus-temperature (cond.)



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### Chemical Media Resistance

#### Salt solutions

**X** Zinc Chloride solution (50% by mass) (23°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).

**X** 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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