

DuPont™ Zytel® RS LC4601 NC010

NYLON RESIN

Product Information

DuPont™ Zytel® LCPA long chain polyamide resins provide an innovative and growing portfolio of flexible polymers with excellent thermal, chemical, and hydrolysis resistance. The diverse selection of Zytel® LCPA grades is targeted for a range of performance characteristics, balancing temperature resistance, flexibility and low permeation.

DuPont™ Zytel® RS LCPA resins contain between 20% and 100% renewably sourced material (by weight) derived from castor beans.

Zytel® RS LC4601 is a flexible, toughened and plasticized polyamide resin for extrusion applications. It contains a minimum of 35% renewable sourced ingredient by weight.

| General information | Value | Unit | Test Standard |
|--|-----------------------|-------------------|----------------------|
| Resin Identification | PA-IP | - | ISO 1043 |
| Part Marking Code | >PA-IP< | - | ISO 11469 |
| Mechanical properties | dry / cond | Unit | Test Standard |
| Tensile Modulus | 750 / * | MPa | ISO 527-1/-2 |
| Yield stress | 33 / * | MPa | ISO 527-1/-2 |
| Yield strain | 13 / * | % | ISO 527-1/-2 |
| Nominal strain at break | >50 / * | % | ISO 527-1/-2 |
| Stress at 50% strain | * / 25 | MPa | ISO 527-1/-2 |
| Stress at Break, 23°C, 50mm/min | 45 / - | MPa | ISO 527-1/-2 |
| Strain at break | | | ISO 527-1/-2 |
| Strain at break 50mm/min | * / >50 360 / - | % % | |
| Flexural Modulus | 700 / - | MPa | ISO 178 |
| Charpy impact strength | | | ISO 179/1eU |
| 73°F | N / - | kJ/m ² | |
| -22°F | N / - | kJ/m ² | |
| Charpy notched impact strength | | | ISO 179/1eA |
| 73°F | 95 ^[P] / - | kJ/m ² | |
| -40°F | 15 / - | kJ/m ² | |
| Izod notched impact strength | | | ISO 180/1A |
| 73°F | 75 / - | kJ/m ² | |
| -40°F | 15 / - | kJ/m ² | |
| P: Partial Break | | | |
| Thermal properties | dry / cond | Unit | Test Standard |
| Melting temperature, 18°F/min | 214 / * | °C | ISO 11357-1/-3 |
| Glass transition temperature, 18°F/min | 50 / 30 | °C | ISO 11357-1/-2 |
| Temp. of deflection under load, 65 psi | 48 / * | °C | ISO 75-1/-2 |
| 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 |
| Humidity absorption, 80mil | 1 / * | % | Sim. to ISO 62 |
| Density | 1040 / - | kg/m ³ | ISO 1183 |
| Extrusion | Value | Unit | Test Standard |
| Drying Temperature | 75 - 80 | °C | - |
| Drying Time, Dehumidified Dryer | 3 - 4 | h | - |
| Processing Moisture Content | ≤0.06 | % | - |
| Melt Temperature Optimum | 235 | °C | - |
| Melt Temperature Range | 230 - 245 | °C | - |

Characteristics

| | | | |
|---------------|---------------------|---------------------|-------------------|
| Processing | • Injection Molding | • Profile Extrusion | • Other Extrusion |
| Delivery form | • Pellets | | |

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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Additives

Special characteristics

- Plasticizer
- Heat stabilized or stable to heat

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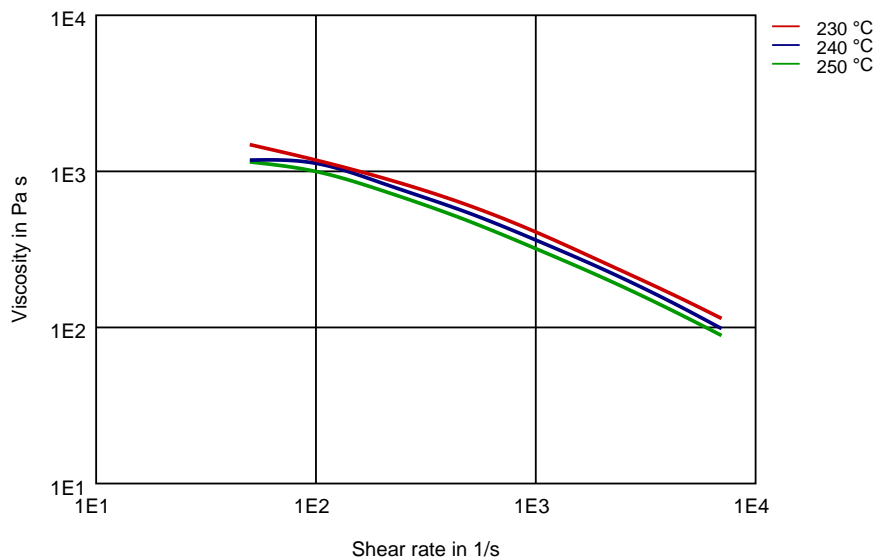
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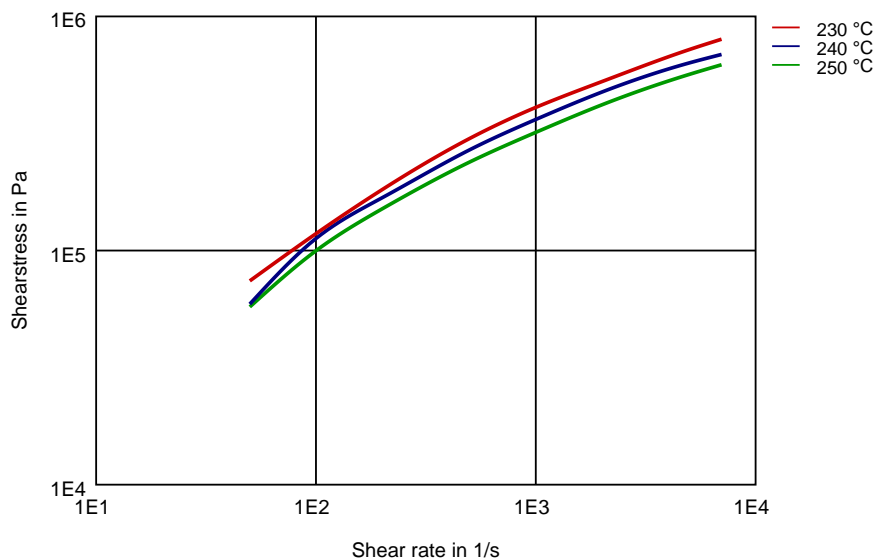
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Diagrams

Viscosity-shear rate



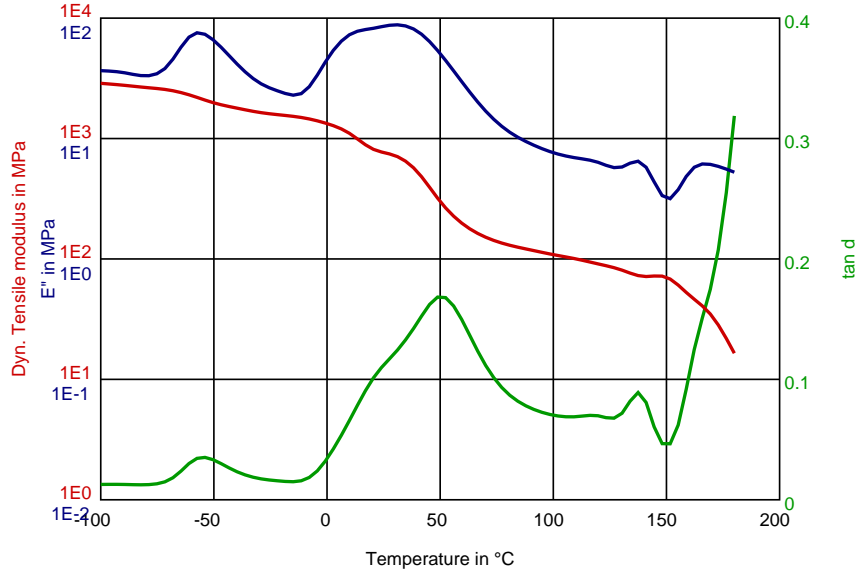
Shearstress-shear rate



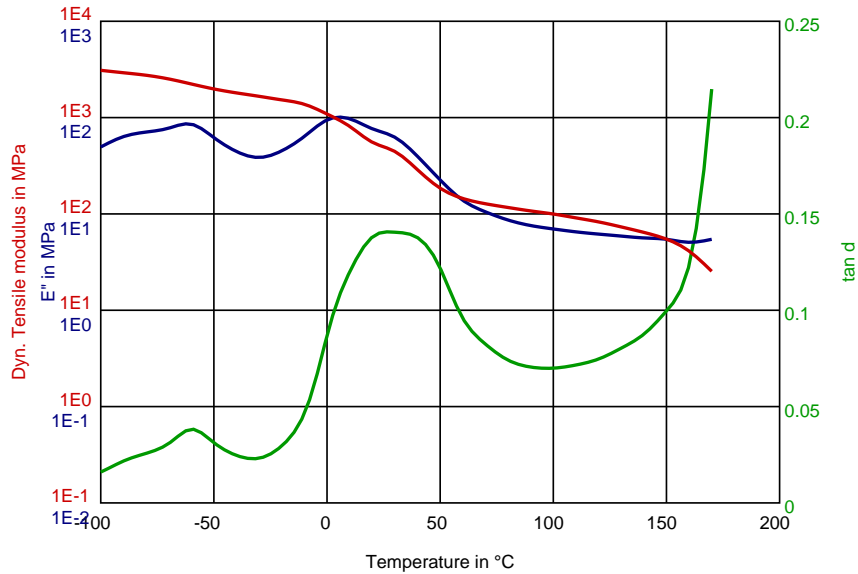
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Dynamic Tensile modulus-temperature (dry)



Dynamic Tensile modulus-temperature (cond.)



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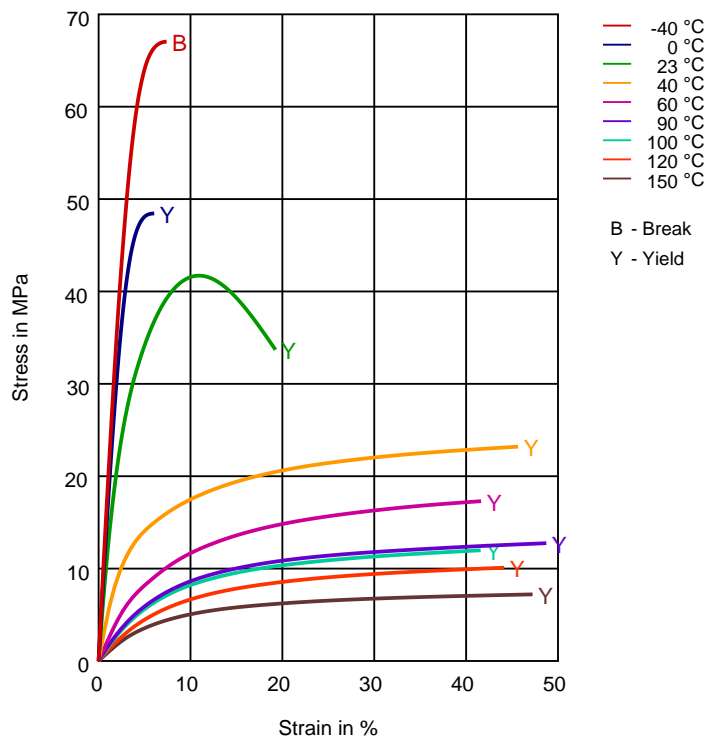
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Stress-strain (dry)



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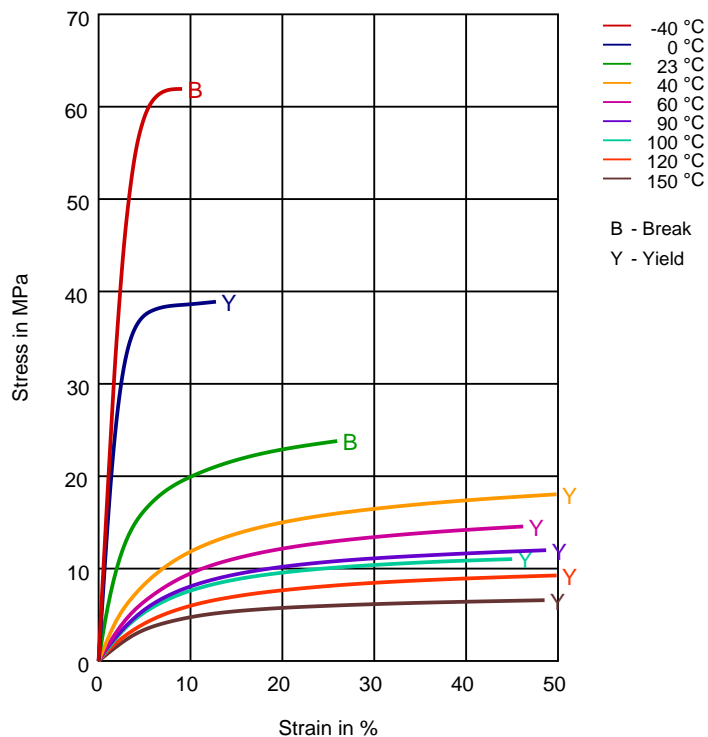
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NYLON RESIN

Stress-strain (cond.)



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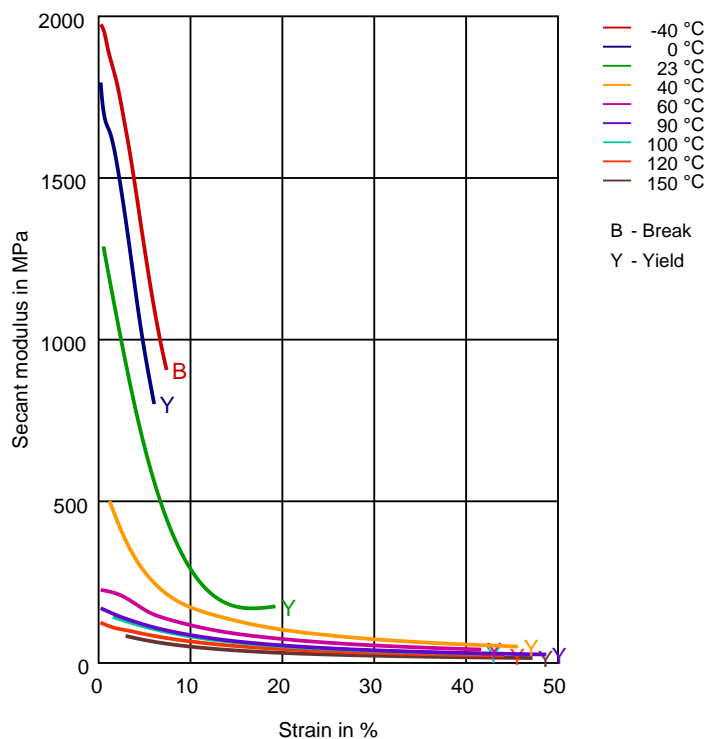
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Secant modulus-strain (dry)



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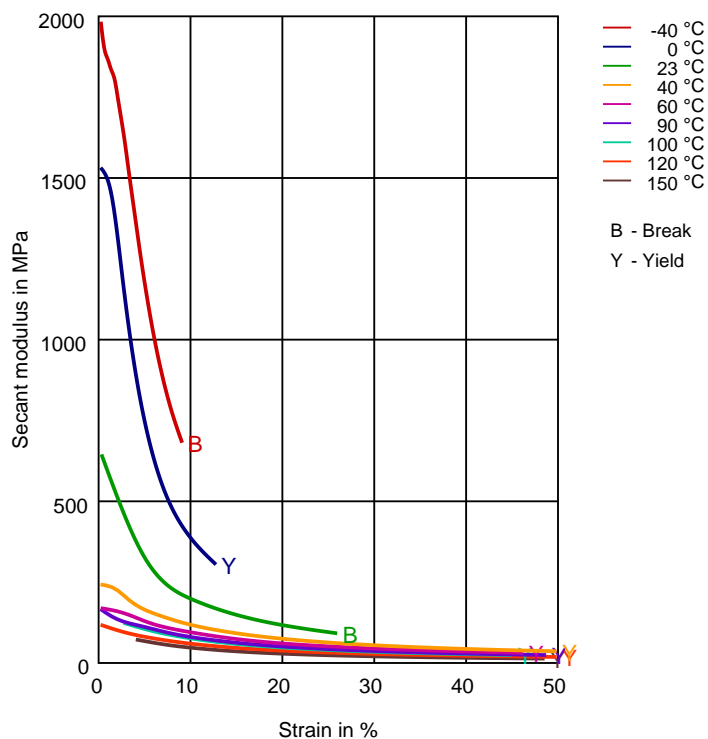
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NYLON RESIN

Secant modulus-strain (cond.)



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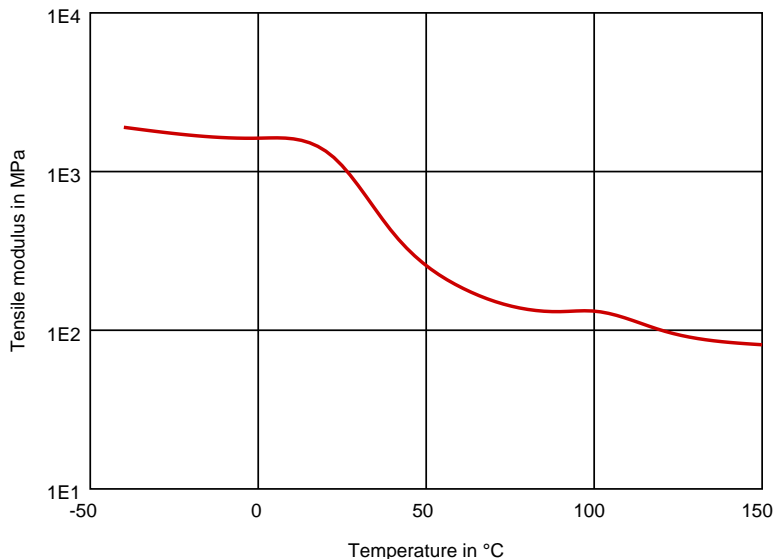
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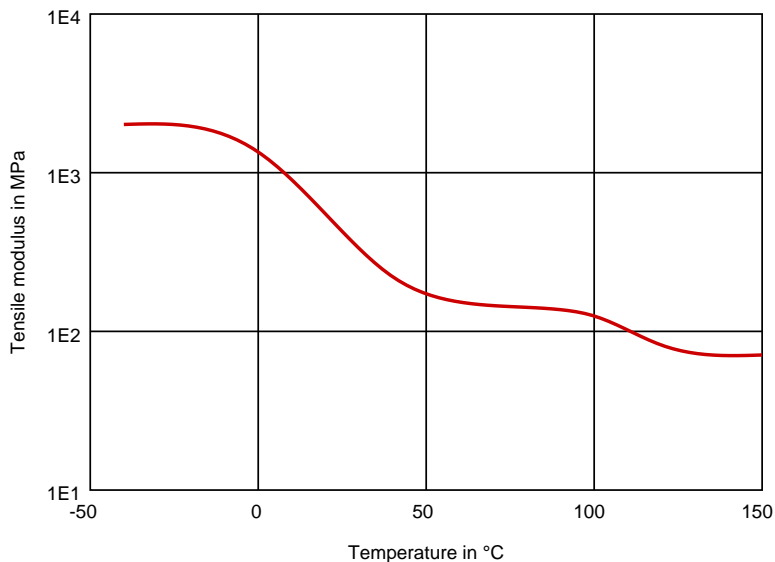
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Tensile modulus-temperature (dry)



Tensile modulus-temperature (cond.)



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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