



LONG CHAIN POLYAMIDE RESIN

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.

Zytel® LC6200 BK385 is a toughened polyamide 612 resin for extrusion applications.

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Product information			
Resin Identification	PA612-F	ISO 1043	
Part Marking Code	>PA612-HI	ISO 11469	
ISO designation	ISO 16396-PA6		
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Rheological properties	dry/cond.		
Melt mass-flow rate	12/*	g/10min	ISO 1133
Melt mass-flow rate, Temperature	250/*	°C	
Melt mass-flow rate, Load	10/*	kg	
Moulding shrinkage, parallel	2.9/4.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.6/0.7	%	ISO 294-4, 2577
Moulding shrinkage, parallel, annealed	4.4/*	%	ISO 294-4
Moulding shrinkage, normal, annealed	0.85/*	%	ISO 294-4
Typical mechanical properties	dry/cond.		
Tensile modulus	1080/720	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	32/29	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	13/22	%	ISO 527-1/-2
Tensile strain at break, 50mm/min	210/-	%	ISO 527-1/-2
Charpy notched impact strength, 23°C	50/80	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	15/15	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	27/66	kJ/m²	ISO 180/1A
Izod notched impact strength, -30 °C	13.0/13.0	kJ/m²	ISO 180/1A
Poisson's ratio	0.45/0.46		
Abrasion resistance	12/*	mm ³	ISO 4649
Thermal properties	dry/cond.		
Melting temperature, 10°C/min	218/*	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	46/*	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel, -40-23°C	150/*	E-6/K	ISO 11359-1/-2
CLTE, Parallel, 23-55°C(73-130°F)	240/-	E-6/K	ASTM E 831
Coeff. of linear therm. expansion, parallel, 55-160°C	483/*	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal, -40-23°C	97/*	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal, 55-160°C	145/*	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, Normal,23-55°C	123/-	E-6/K	ASTM E 831
(73-130°F)	,	_ 0,11	7.0 = 00 .
Thermal conductivity, flow	0.37	W/(m K)	ISO 22007-2
Thermal conductivity of melt	0.17	W/(m K)	ISO 22007-2
Specific heat capacity of melt	2690	J/(kg K)	ISO 22007-4
Specific heat capacity solid	1660	J/(kg K)	ISO 22007-4
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TGA curve available ISO 11359-1/-2

Flammability

FMVSS Class B ISO 3795 (FMVSS 302) Burning rate, Thickness 1 mm <80 mm/min ISO 3795 (FMVSS 302)

Electrical properties dry/cond.

Physical/Other properties dry/cond.

Humidity absorption, 2mm 0.7/* % Sim. to ISO 62 Density 1000/- kg/m³ ISO 1183 Density of melt 820 kg/m³

Extrusion

Characteristics

Processing Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion

Delivery form Pellets

Special characteristics High impact or impact modified, Heat stabilised or stable to heat

Additional information

Profile extrusion

POSTPROCESSING

Automotive

OEM STANDARD ADDITIONAL INFORMATION

General Motors GMW17558P-PA612 Black

Renault-Nissan UB08b, No Spec, Special Part Approval, See

Your CE Account Manager.

Renault-Nissan UB09g, No Spec, Special Part Approval, See

Your CE Account Manager.

Renault-Nissan UB16c, No Spec, Special Part Approval, See

Your CE Account Manager.

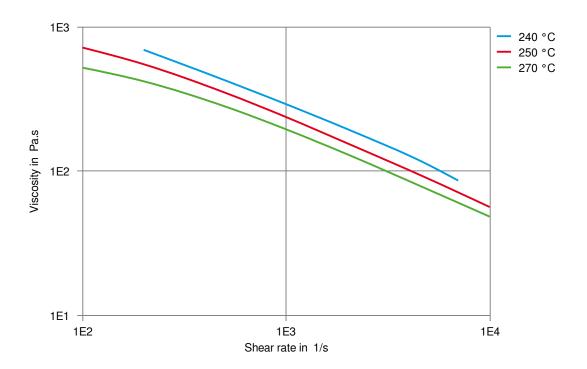
Stellantis - Chrysler MS.50017 / CPN-4970 Black

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Viscosity-shear rate



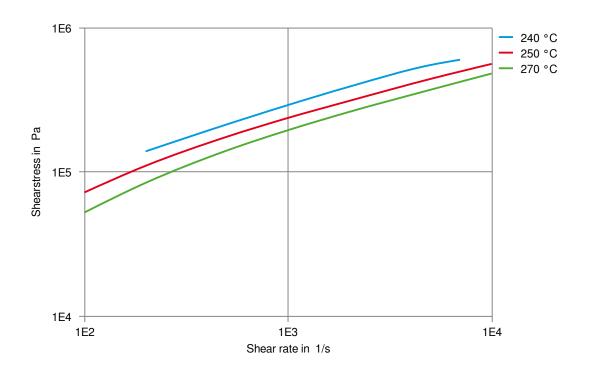
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LONG CHAIN POLYAMIDE RESIN

Shearstress-shear rate



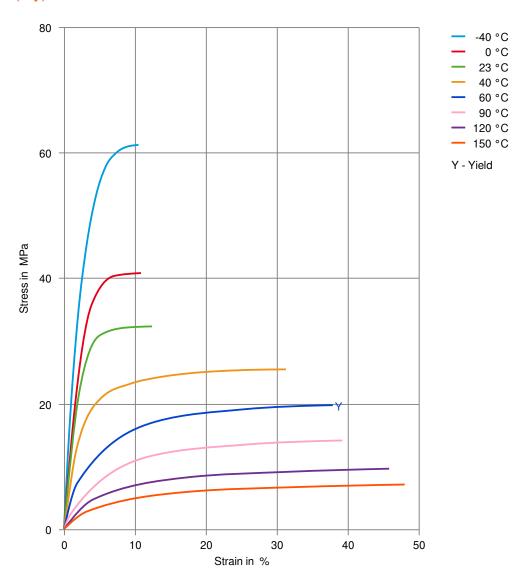
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LONG CHAIN POLYAMIDE RESIN

Stress-strain (dry)



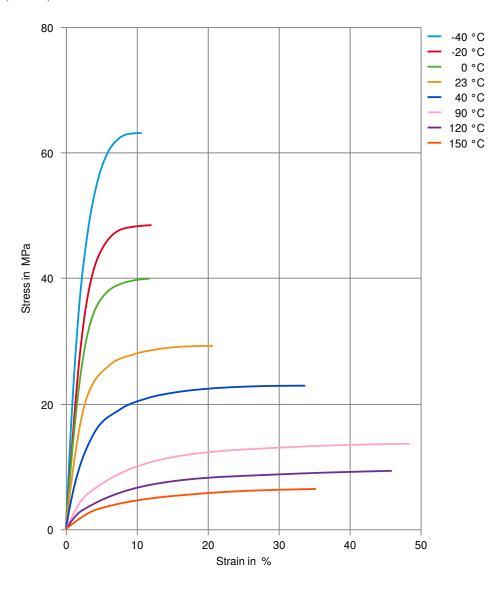
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LONG CHAIN POLYAMIDE RESIN

Stress-strain (cond.)



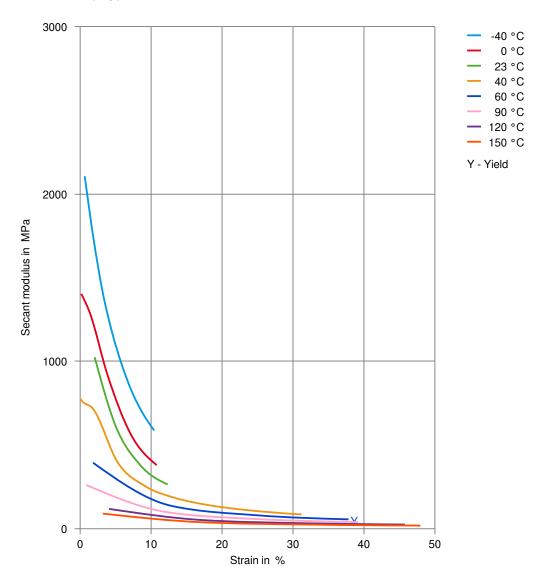
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LONG CHAIN POLYAMIDE RESIN

Secant modulus-strain (dry)



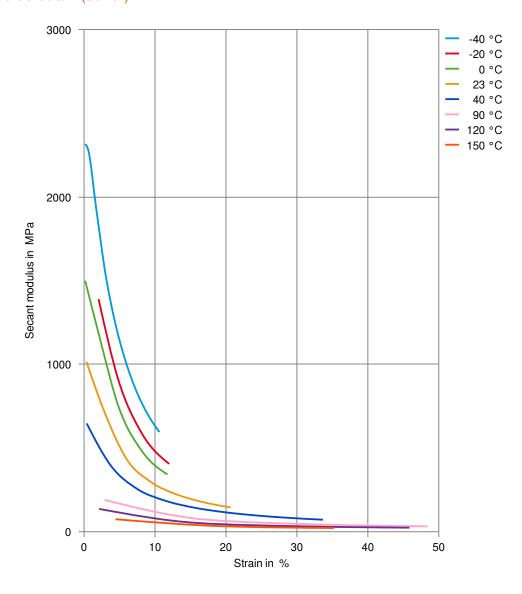
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LONG CHAIN POLYAMIDE RESIN

Secant modulus-strain (cond.)



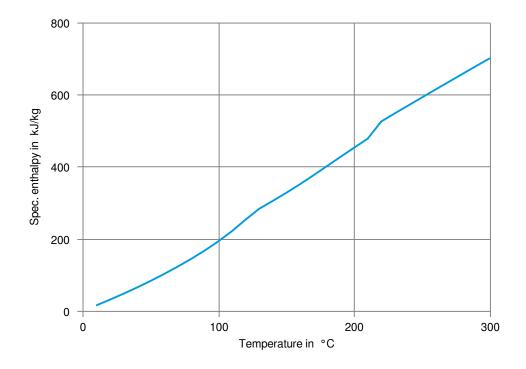
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LONG CHAIN POLYAMIDE RESIN

Spec. enthalpy/mass-temp. (DSC)



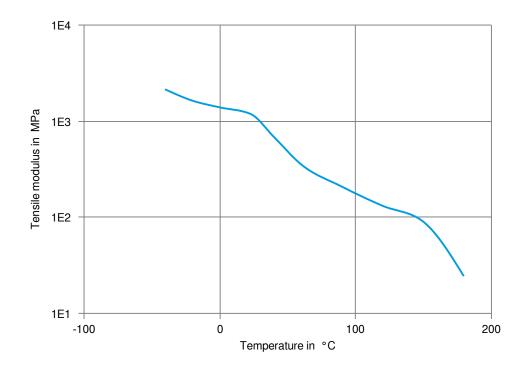
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LONG CHAIN POLYAMIDE RESIN

Tensile modulus-temperature (dry)



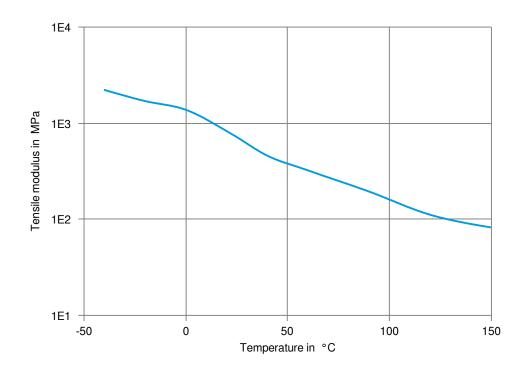
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Zytel® LC6200 BK385 LONG CHAIN POLYAMIDE RESIN

Tensile modulus-temperature (cond.)



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Zytel® LC6200 BK385

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Chemical Media Resistance

Other

✓ Urea solution (32.5% 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).

★ 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).

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Revised: 2025-04-23 Source: Celanese Materials Database

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any e

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