

Zytel® LC6200 BK385

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.

Product information

Resin Identification	PA612-HI	ISO 1043
Part Marking Code	>PA612-HI<	ISO 11469
ISO designation	ISO 16396-PA612-I,,M1CG1H,S18-010	

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/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	15/15	kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	27/66	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C	13.0/13.0	kJ/m ²	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 (73-130°F)	123/-	E-6/K	ASTM E 831
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

Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

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.

Volume resistivity

>1E13/-

Ohm.m

IEC 62631-3-1

Surface resistivity

* / >1E15

Ohm

IEC 62631-3-2

Electric strength

34/-

kV/mm

IEC 60243-1

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

Drying Temperature

75 - 80 °C

Drying Time, Dehumidified Dryer

3 - 4 h

Processing Moisture Content

≤0.06 %

Melt Temperature Optimum

240 °C

Melt Temperature Range

235 - 250 °C

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

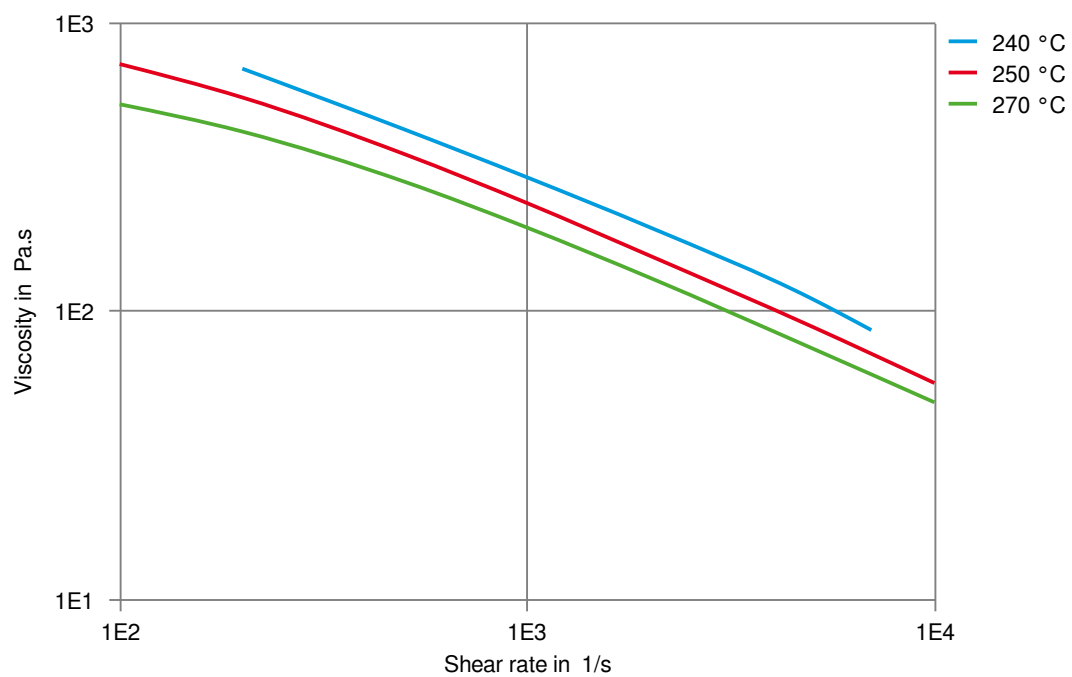
MS.50017 / CPN-4970

Black

Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

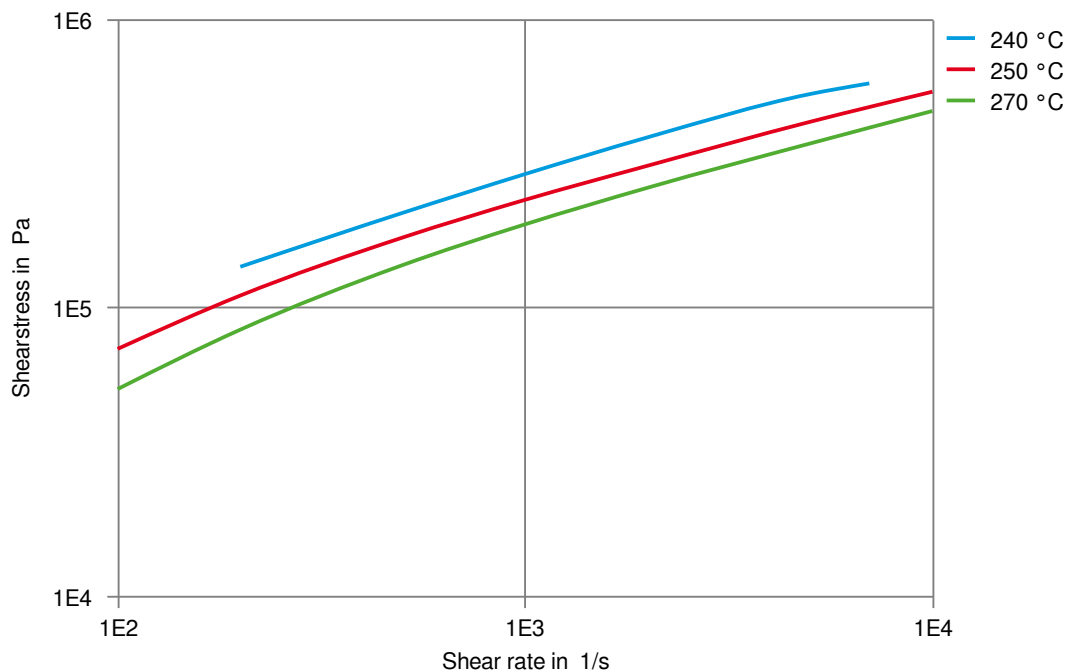
Viscosity-shear rate



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

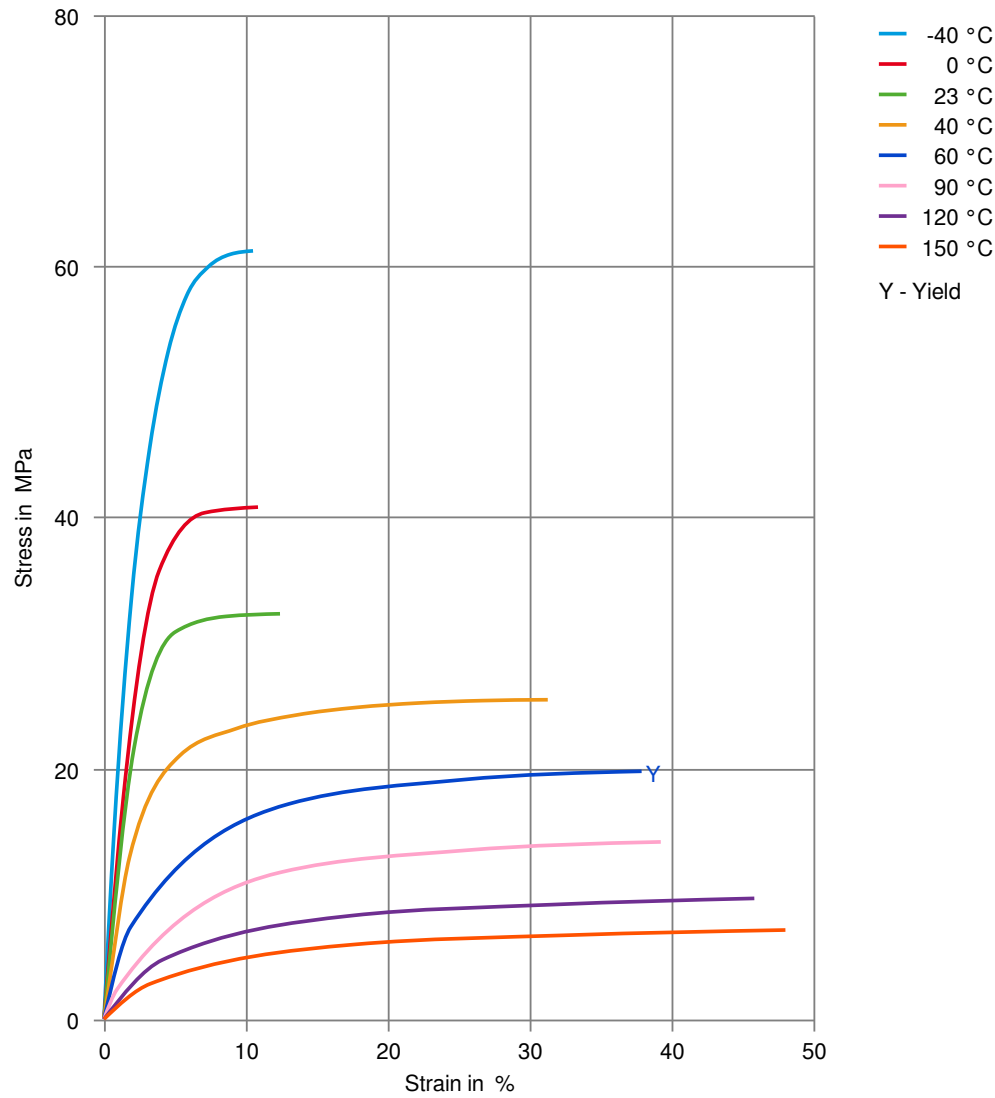
Shearstress-shear rate



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

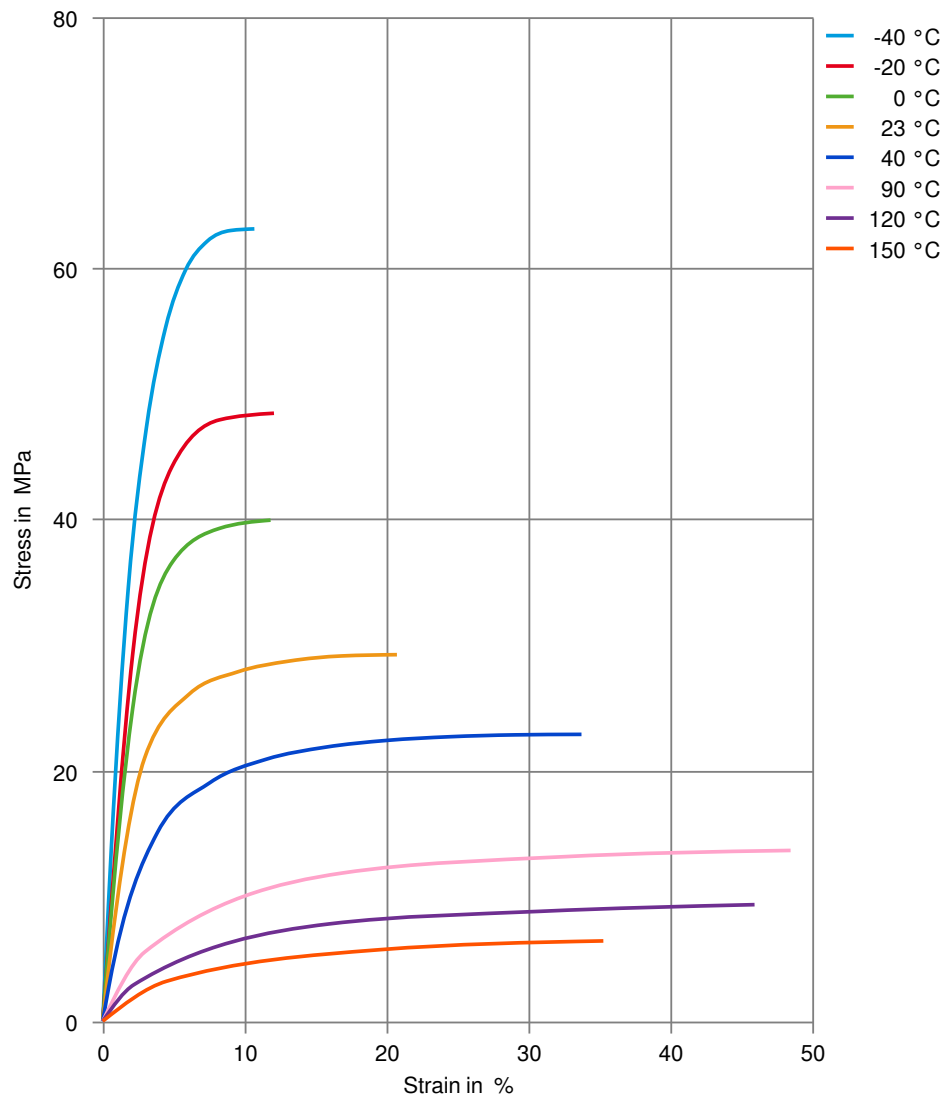
Stress-strain (dry)



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

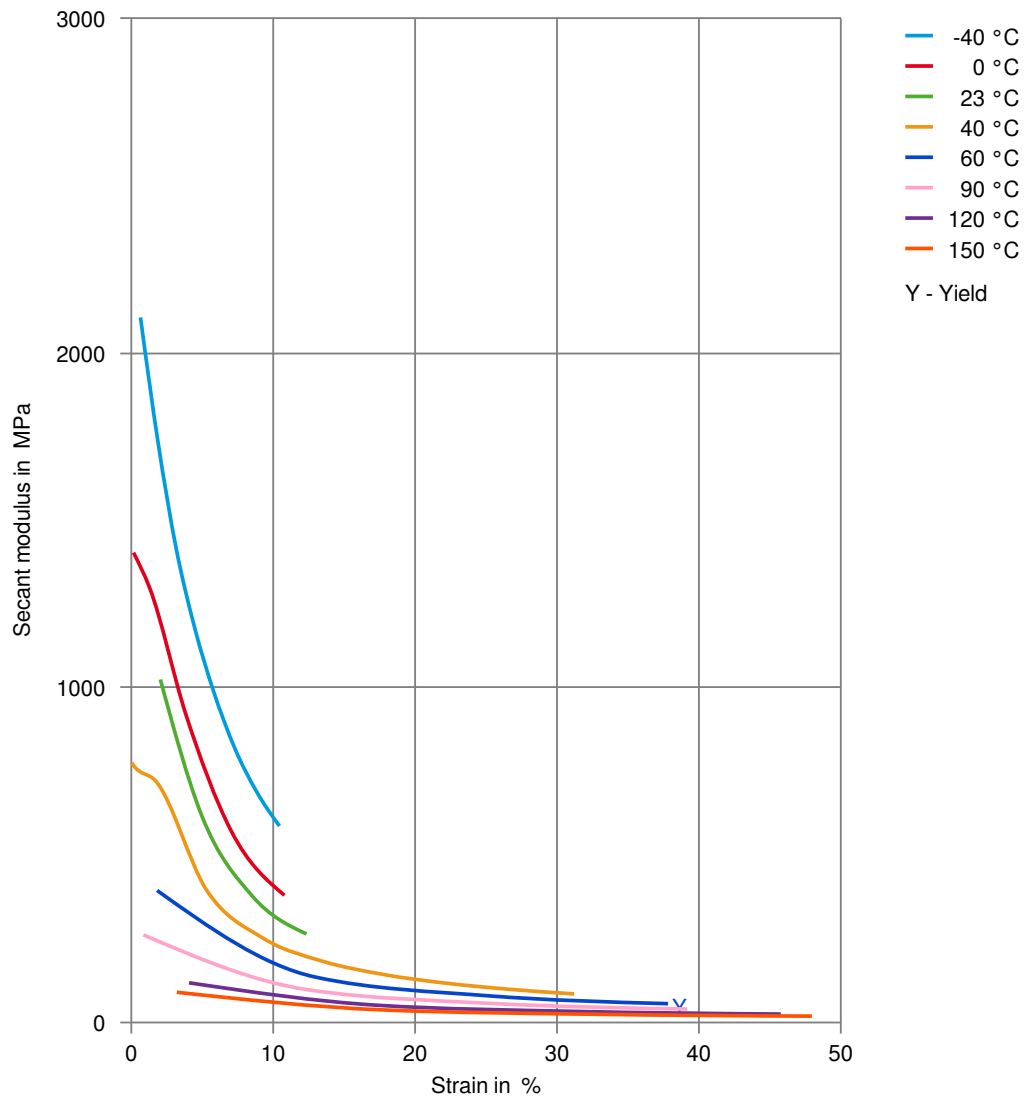
Stress-strain (cond.)



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

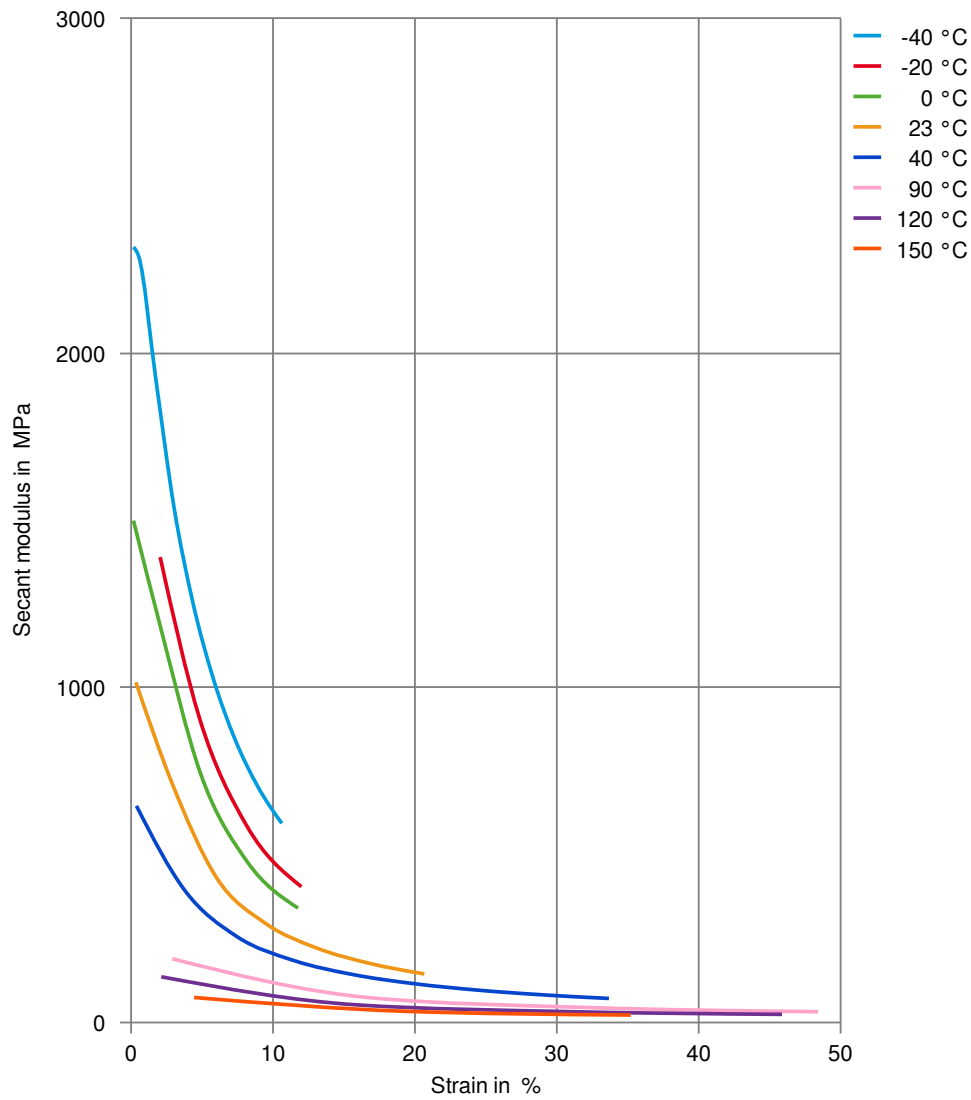
Secant modulus-strain (dry)



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

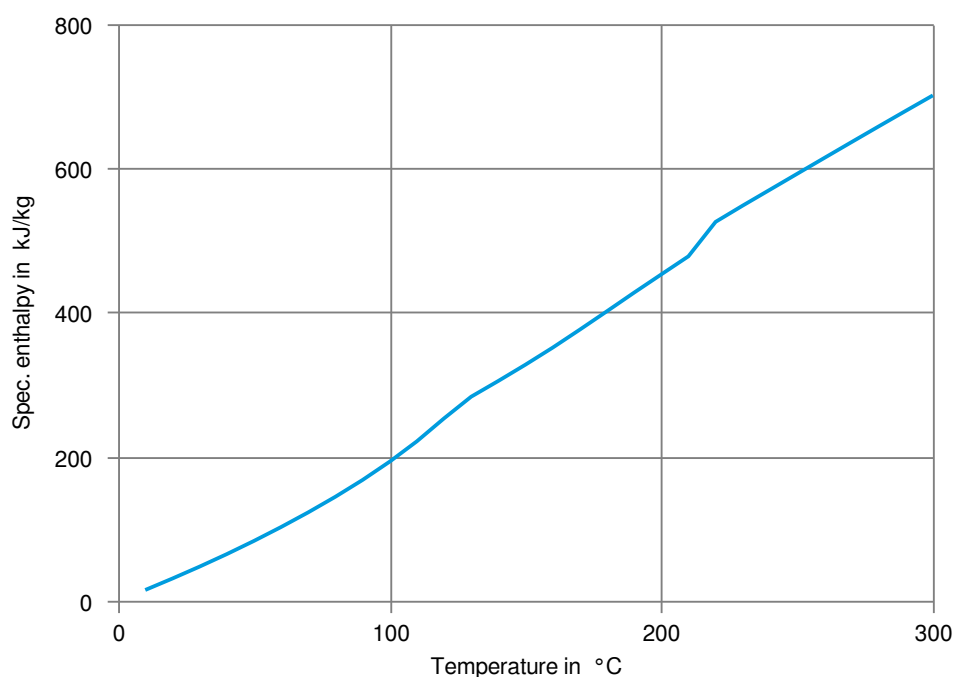
Secant modulus-strain (cond.)



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

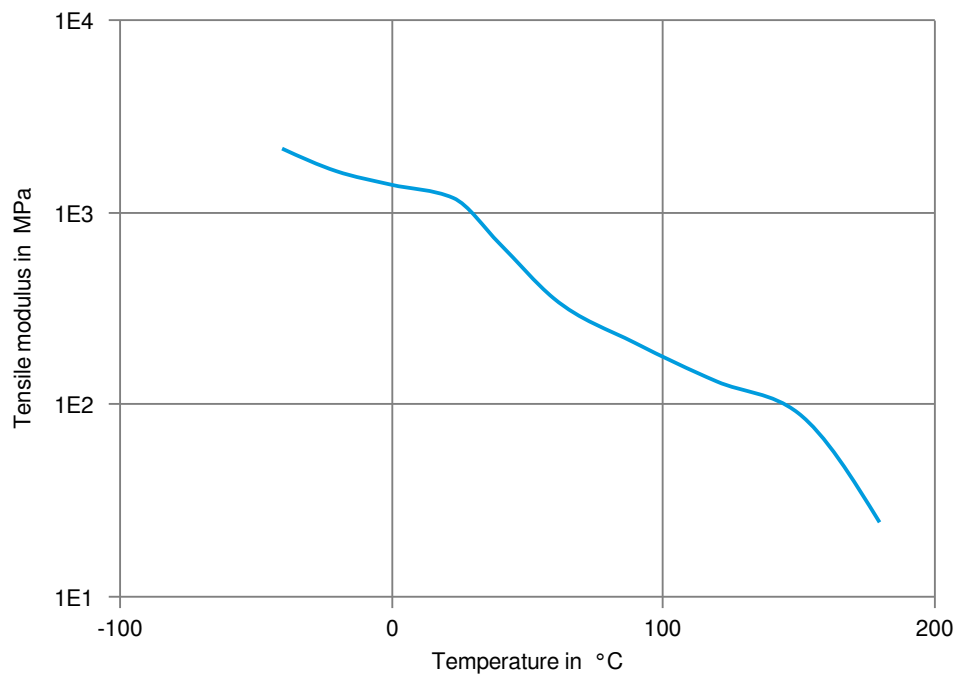
Spec. enthalpy/mass-temp. (DSC)



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

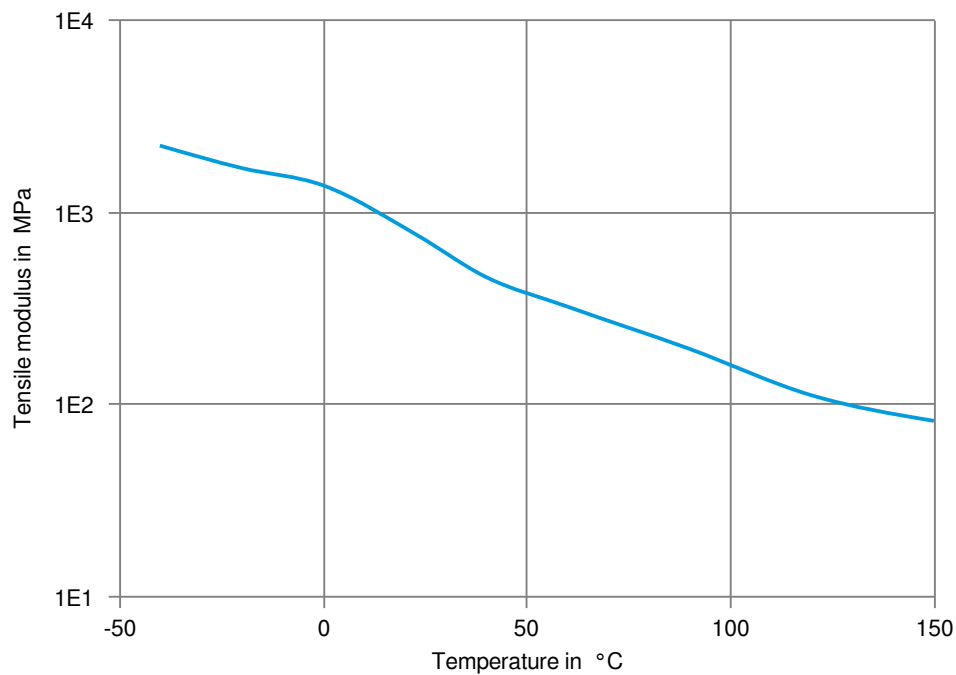
Tensile modulus-temperature (dry)



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

Tensile modulus-temperature (cond.)



Zytel® LC6200 BK385

LONG CHAIN POLYAMIDE RESIN

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).