Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

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® LC6210 BK010 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,,M1CG1HL1,S18-010	

Typical mechanical properties

	dry/cond.		
Tensile modulus	1100 / 750	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	33 / 30	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	19 / 30	%	ISO 527-1/-2
Nominal strain at break	>50 / >50	%	ISO 527-1/-2
Tensile strain at break, 50mm/min	>50[1] / >50	%	ISO 527-1/-2
Charpy notched impact strength, 23°C	50 / 80	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	13 / 12	kJ/m²	ISO 179/1eA
Poisson's ratio	0.45 / 0.46		

[1]: >100

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	216 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	47 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	83 / *	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	250 / *	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	120 / *	E-6/K	ISO 11359-1/-2

Flammability

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

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	0.65 / *	%	Sim. to ISO 62
Density	1010 / -	kg/m³	ISO 1183

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

Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Characteristics

Processing	Injection Moulding, Extrusion, Other Extrusion
Delivery form	Pellets
Special characteristics	High impact or impact modified, U.V. stabilised or stable to weather, Heat stabilised or stable to heat

Automotive

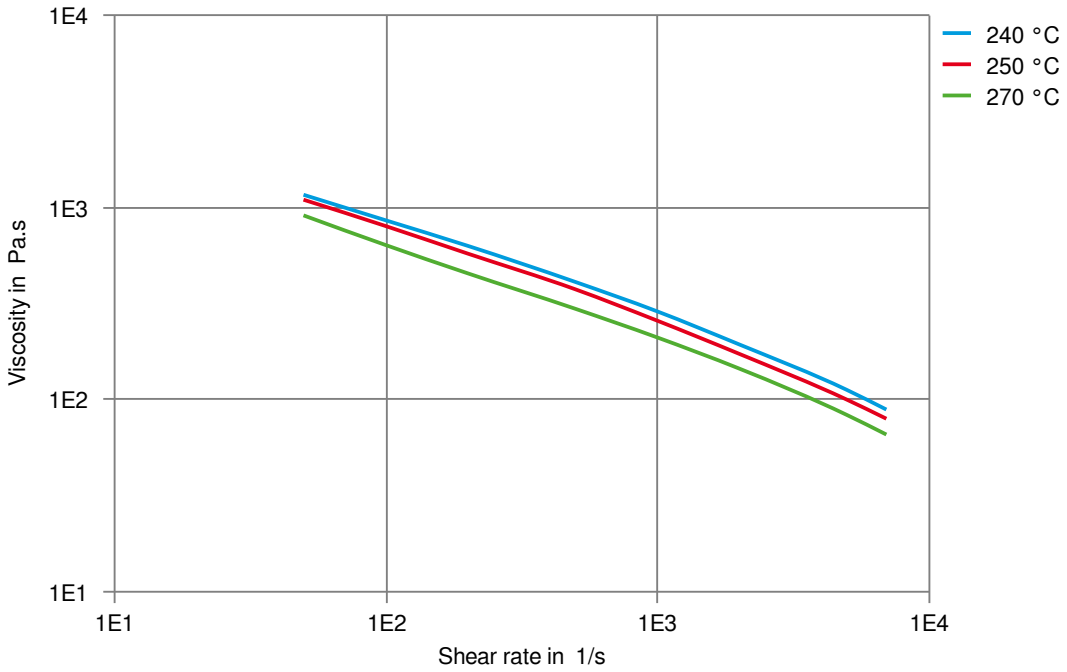
OEM	ADDITIONAL INFORMATION
Renault-Nissan	UB03a, No Spec, Special Part Approval, See Your CE Account Manager.
Renault-Nissan	UB06b, No Spec, Special Part Approval, See Your CE Account Manager.

Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Viscosity-shear rate

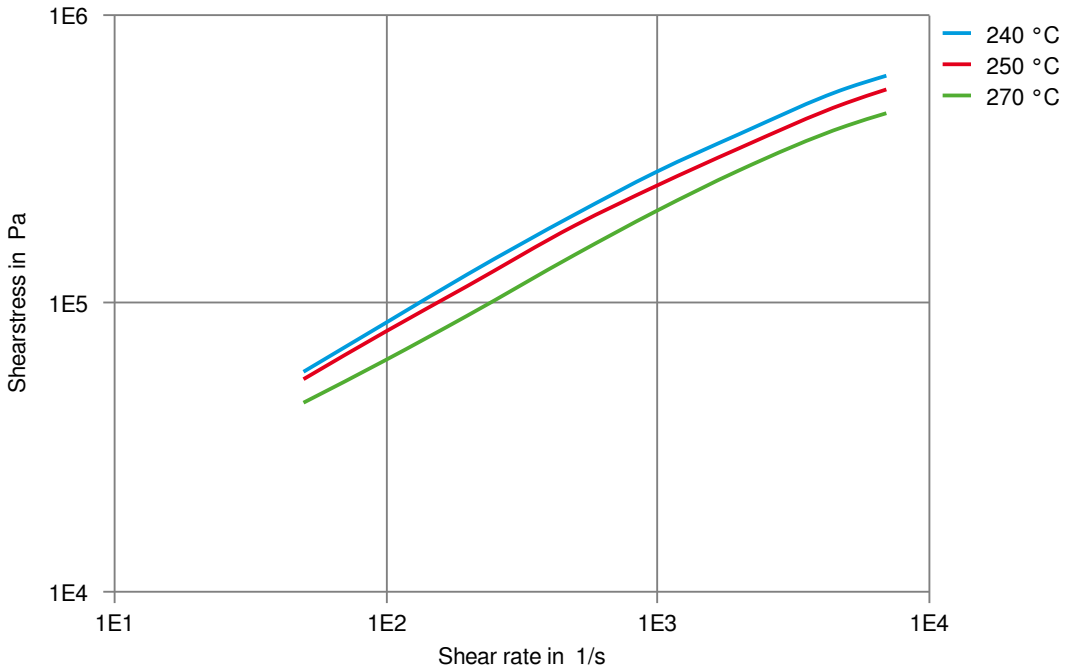


Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Shearstress-shear rate

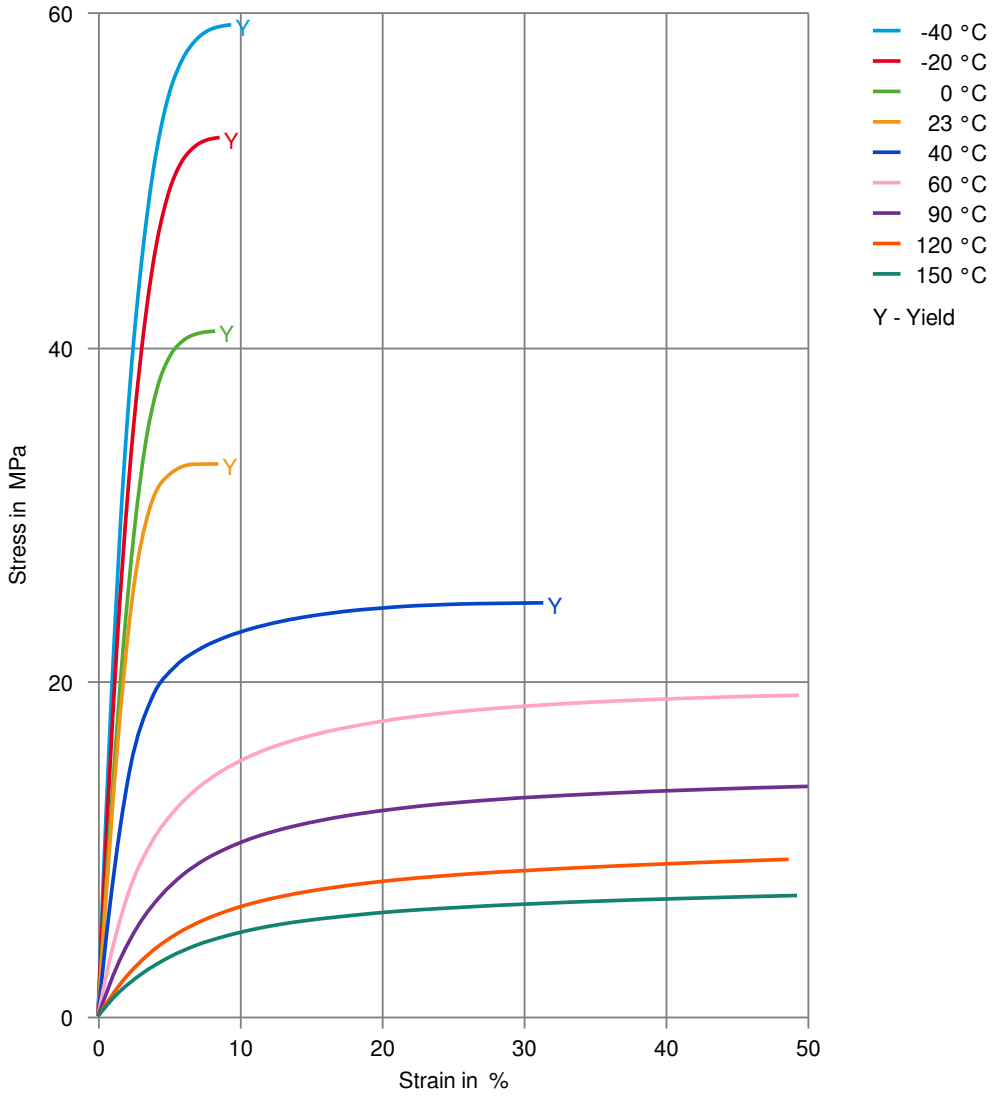


Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Stress-strain (dry)

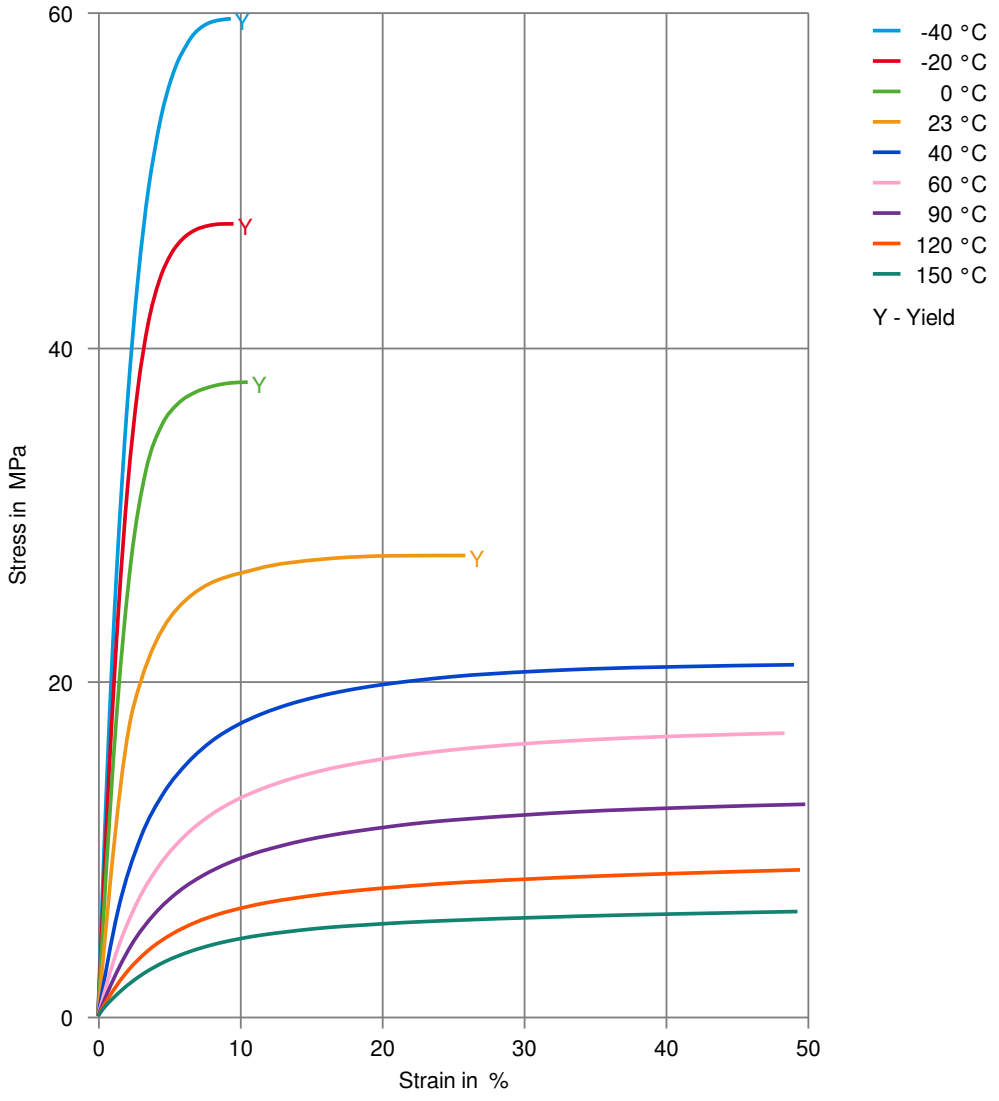


Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Stress-strain (cond.)

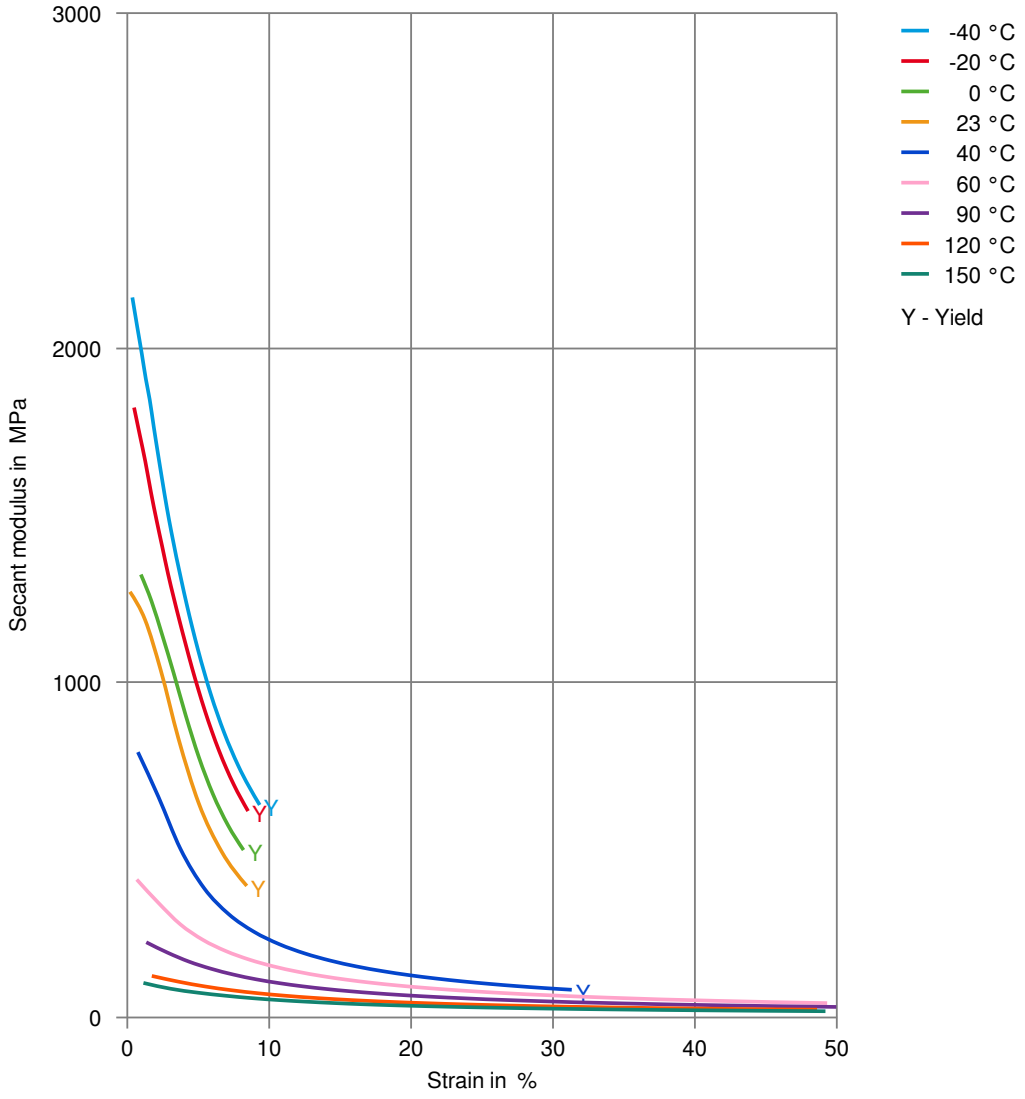


Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Secant modulus-strain (dry)

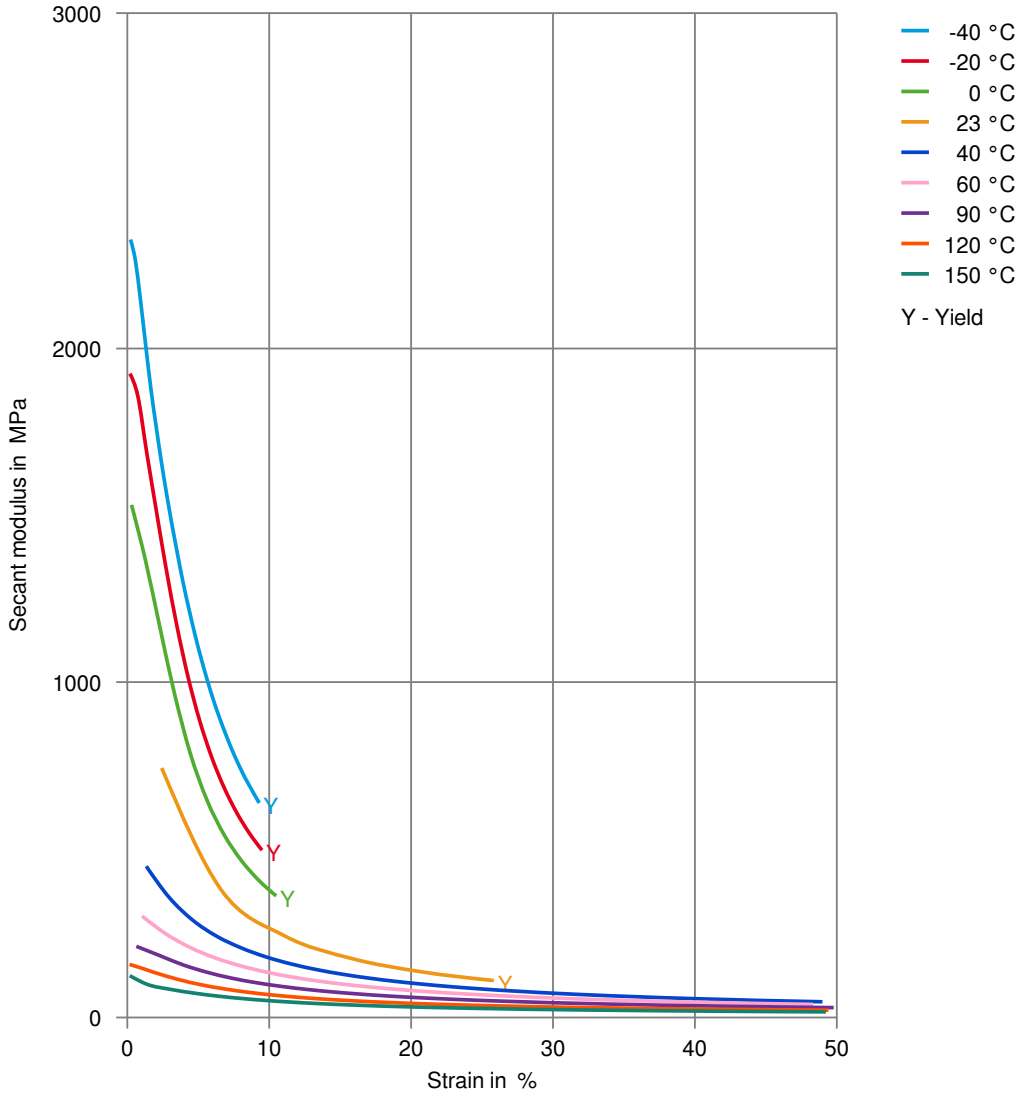


Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Secant modulus-strain (cond.)

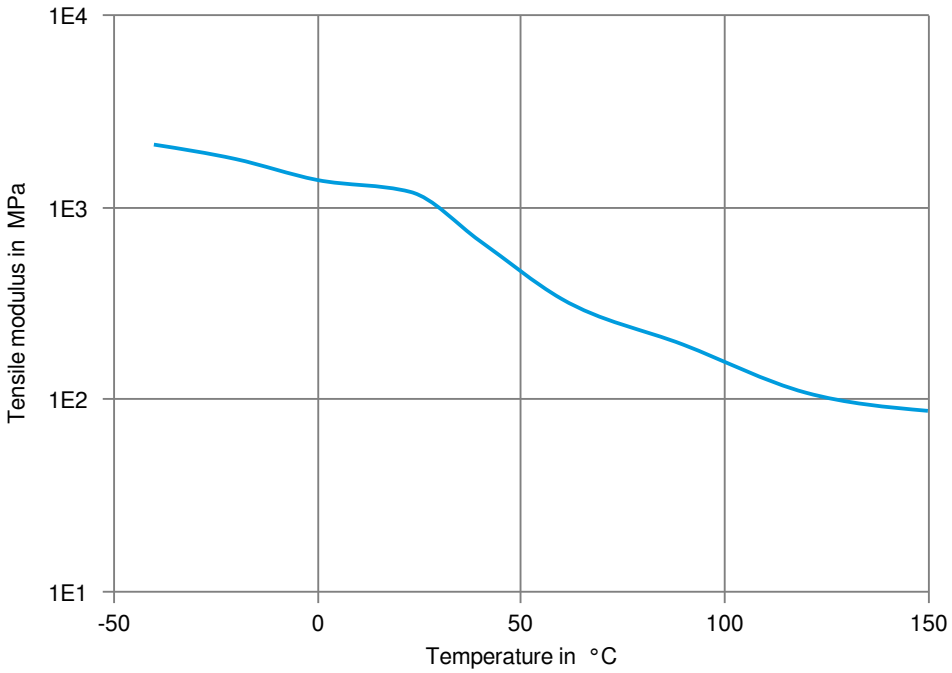


Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Tensile modulus-temperature (dry)

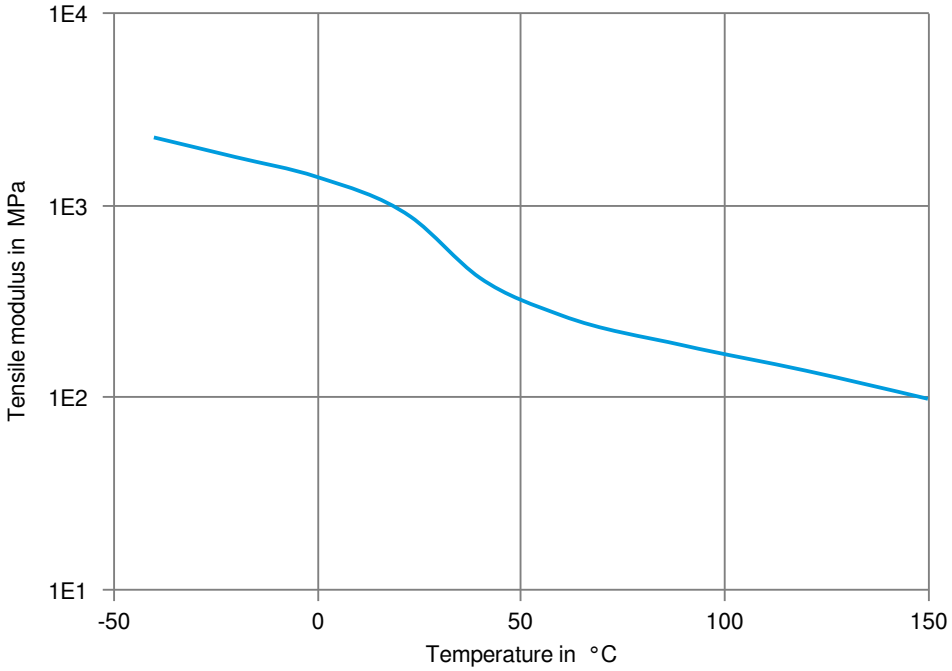


Celanese
The chemistry inside innovation™

Zytel® LC6210 BK010

LONG CHAIN POLYAMIDE RESIN

Tensile modulus-temperature (cond.)



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