

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 Part Marking Code ISO designation	PA612-HI >PA612-HI< ISO 16396-PA612-I,,M1CG1H,S18-010		ISO 1043 ISO 11469
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 (73-130°F)	123/-	E-6/K	ASTM E 831
Thermal conductivity, flow	0.37	W/(m K)	ISO 22007-2
Thermal conductivity, new 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

Electrical properties dry/cond.

Physical/Other properties dry/cond.

Extrusion

Drying Temperature75 - 80 °CDrying Time, Dehumidified Dryer3 - 4 hProcessing Moisture Content≤0.06 %Melt Temperature Optimum240 °CMelt Temperature Range235 - 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

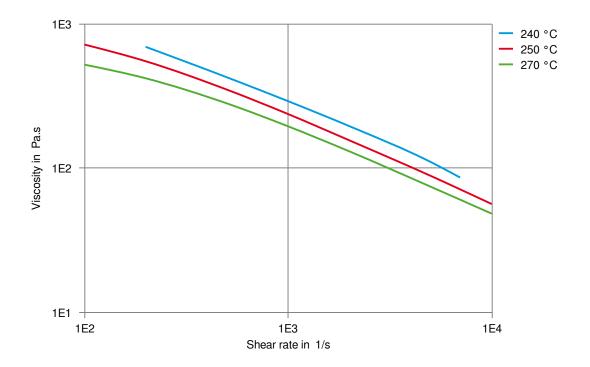
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Viscosity-shear rate

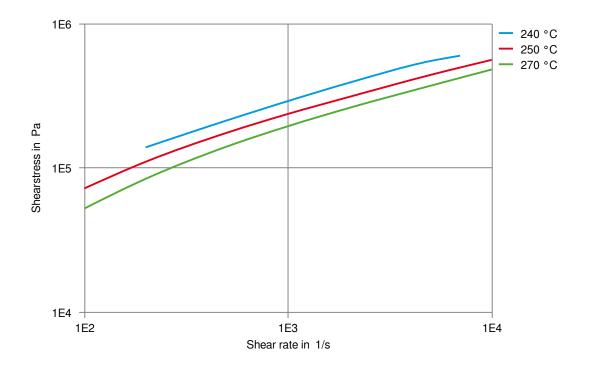


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LONG CHAIN POLYAMIDE RESIN

Shearstress-shear rate

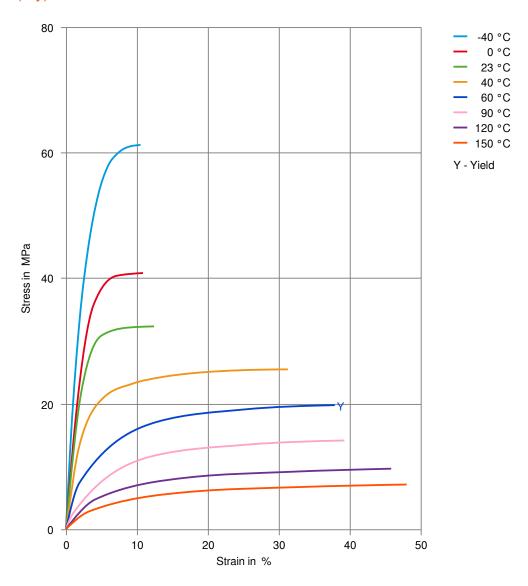


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LONG CHAIN POLYAMIDE RESIN

Stress-strain (dry)

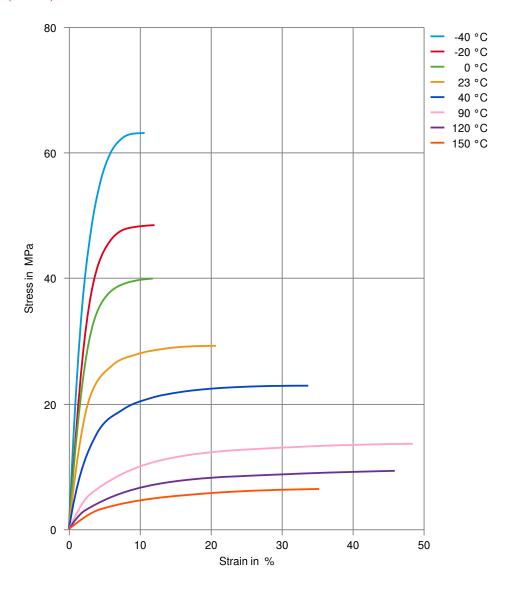


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Stress-strain (cond.)

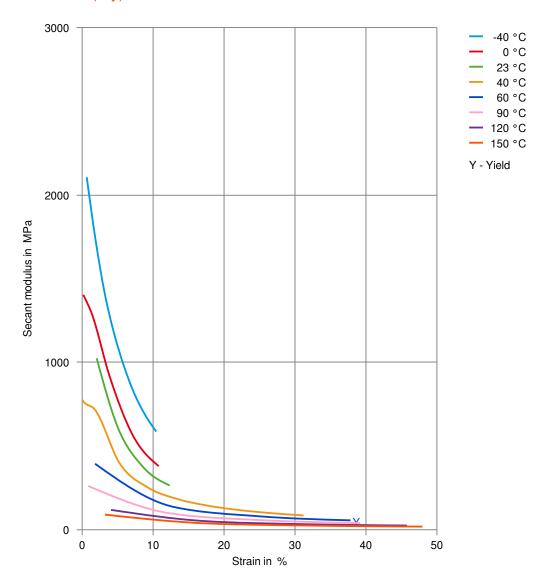


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LONG CHAIN POLYAMIDE RESIN

Secant modulus-strain (dry)

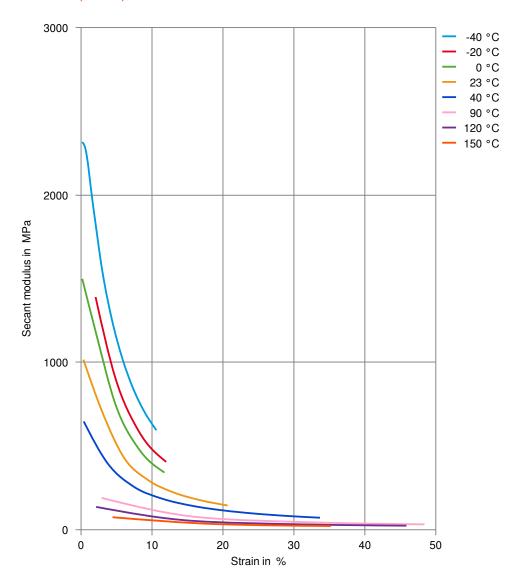


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LONG CHAIN POLYAMIDE RESIN

Secant modulus-strain (cond.)

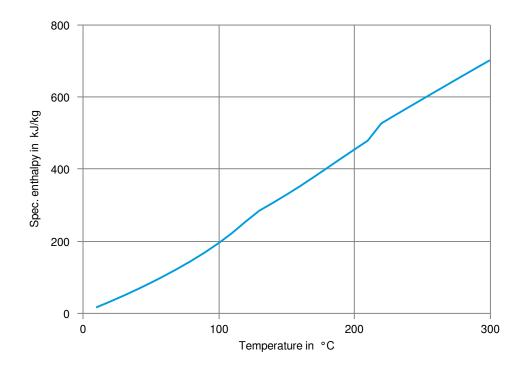


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LONG CHAIN POLYAMIDE RESIN

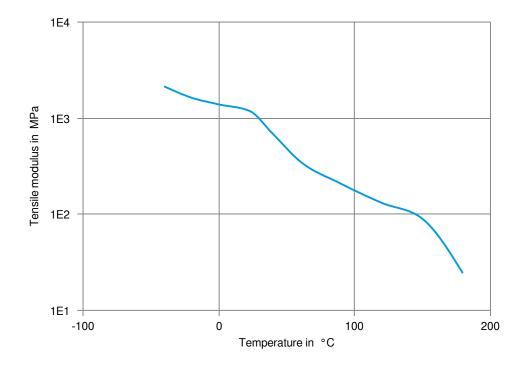
Spec. enthalpy/mass-temp. (DSC)



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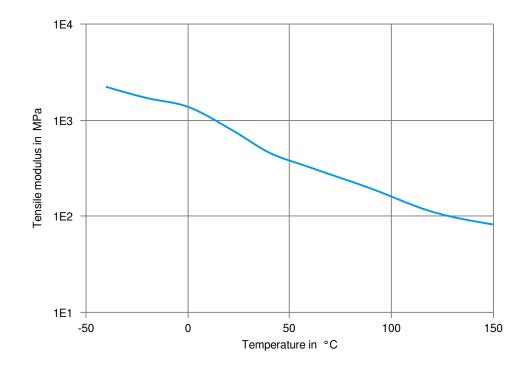
Tensile modulus-temperature (dry)



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Tensile modulus-temperature (cond.)



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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).

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).

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