



HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTN high performance polyamide resins feature high retention of properties upon exposure to elevated temperature, to high moisture, and to harsh chemical environments. Polymer families and grades of Zytel® HTN are tailored to optimize performance as well as processability.

Typical applications with Zytel® HTN include demanding applications in the automotive, electrical and electronics, domestic appliances, and construction industries.

Zytel® HTNFE8200 NC010 is an unreinforced, toughened, heat stabilised high performance polyamide resin for injection moulding. It is also a PPA resin.

Product information

Resin Identification Part Marking Code Part Marking Code ISO designation	PA6T/XT-HI >PA6T/XT-HI< >PPA-I< ISO 16396-PA6T/XT-I,,M1G1HNR,S10-020		ISO 1043 ISO 11469 SAE J1344
Rheological properties	dry/cond.		
Moulding shrinkage, parallel Moulding shrinkage, normal	0.8/- 0.9/-	% %	ISO 294-4, 2577 ISO 294-4, 2577
Typical mechanical properties	dry/cond.		
Tensile modulus Tensile stress at yield, 50mm/min Tensile strain at yield, 50mm/min Nominal strain at break Flexural modulus Charpy impact strength, 23°C Charpy impact strength, -30°C Charpy notched impact strength, 23°C Izod notched impact strength, 23°C Izod notched impact strength, -40°C Poisson's ratio Tribological properties Coefficient of sliding friction, 1h against steel	2200/2300 68/68 5.5/4.4 14/10 2100/2200 N/N N/N 75/- 75/- 18.0/- 0.39/0.39 dry/cond. -/0.4	MPa MPa % % MPa kJ/m² kJ/m² kJ/m²	ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 178 ISO 179/1eU ISO 179/1eU ISO 179/1eA ISO 180/1A ISO 180/1A
Thermal properties	dry/cond.		
Melting temperature, 10°C/min Melting temperature, first heat Temperature of deflection under load, 1.8 MPa Temperature of deflection under load, 0.45 MPa Coeff. of linear therm. expansion, parallel, -40-23°C Coefficient of linear thermal expansion (CLTE), parallel Coeff. of linear therm. expansion, parallel, 55-160°C Coeff. of linear therm. expansion, normal, -40-23°C Coefficient of linear thermal expansion (CLTE), normal	300/* 300/* 126/* 138/* 90/* 90/* 91/* 72/* 84/*	°C °C °C °C E-6/K E-6/K E-6/K E-6/K	ISO 11357-1/-3 ISO 11357-1/-3 ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2 ISO 11359-1/-2 ISO 11359-1/-2 ISO 11359-1/-2

Printed: 2025-05-30 Page: 1 of 12





HIGH PERFORMANCE POLYAMIDE RESIN

Coeff. of linear therm. expansion, normal, 55-160°C Thermal conductivity, flow Thermal conductivity of melt Specific heat capacity of melt RTI, electrical, 0.75mm RTI, electrical, 1.5mm RTI, electrical, 3.0mm RTI, impact, 0.75mm RTI, impact, 1.5mm RTI, impact, 3.0mm RTI, strength, 0.75mm RTI, strength, 1.5mm RTI, strength, 3.0mm	86/* 0.27 0.18 2220 85 85 85 85 85 85 85 85	E-6/K W/(m K) W/(m K) J/(kg K) °C °C °C °C °C °C	ISO 11359-1/-2 ISO 22007-2 ISO 22007-2 ISO 22007-4 UL 746B
Flammability	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB/*	class	IEC 60695-11-10
Thickness tested UL recognition	1.5/* yes/*	mm	IEC 60695-11-10 UL 94
Burning Behav. at thickness h	HB/*	class	IEC 60695-11-10
Thickness tested	0.75/*	mm	IEC 60695-11-10
UL recognition	yes/*		UL 94
FMVSS Class	В	, .	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
Comparative tracking index	600/-		IEC 60112
Physical/Other properties	dry/cond.		
Humidity absorption, 2mm	1.9/*	%	Sim. to ISO 62
Water absorption, 2mm	6.3/*	%	Sim. to ISO 62
Density of malt	1130/-	kg/m³	ISO 1183
Density of melt	970	kg/m³	
Injection			
Drying Recommended	yes		
Drying Temperature Drying Time, Dehumidified Dryer	100 6 - 8		
Processing Moisture Content	6-8 ≤0.1		
Melt Temperature Optimum	325		
Min. melt temperature	320		
Max. melt temperature	330		
Mold Temperature Optimum		°C	
Min. mould temperature Max. mould temperature	100	°C	
Ejection temperature	245		
	210	-	

Printed: 2025-05-30 Page: 2 of 12





HIGH PERFORMANCE POLYAMIDE RESIN

Characteristics

Processing Injection Moulding

Delivery form Pellets

Additives Release agent

Special characteristics Heat stabilised or stable to heat

Additional information

Injection molding During molding, use proper protective equipment and adequate ventilation.

Avoid exposure to fumes and limit the hold up time and temperature of the resin in

the machine. Purge degraded resin carefully with HDPE.

Automotive

OEM STANDARD ADDITIONAL INFORMATION

 General Motors
 GMW16799P-PPA-T2
 Natural

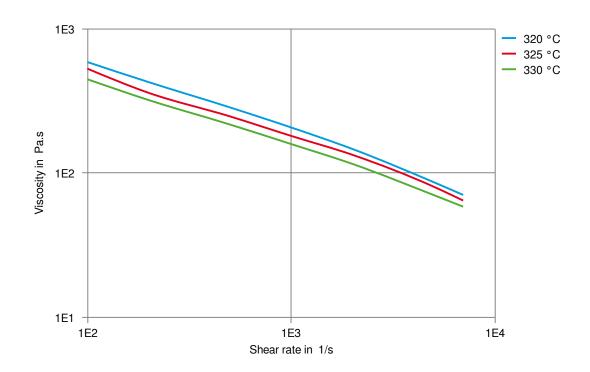
 Stellantis - Chrysler
 MS.50103 / CPN-5292
 Natural

Printed: 2025-05-30 Page: 3 of 12





Viscosity-shear rate

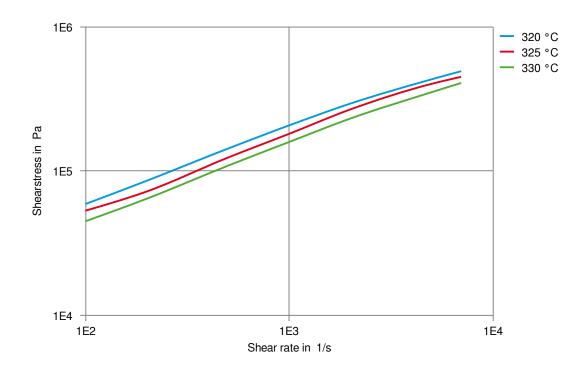


Printed: 2025-05-30 Page: 4 of 12





Shearstress-shear rate



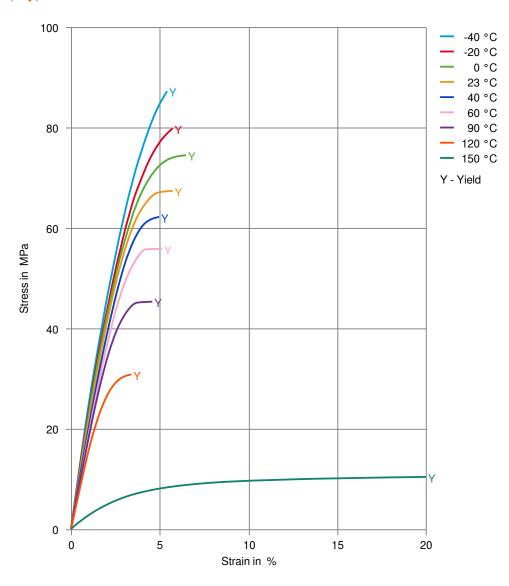
Printed: 2025-05-30 Page: 5 of 12





HIGH PERFORMANCE POLYAMIDE RESIN

Stress-strain (dry)



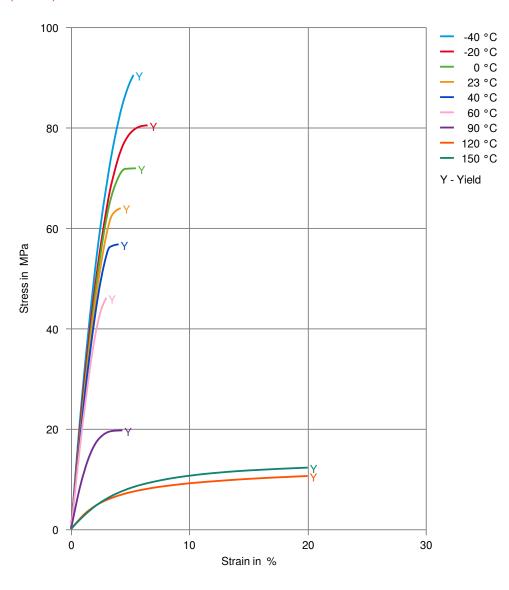
Printed: 2025-05-30 Page: 6 of 12





HIGH PERFORMANCE POLYAMIDE RESIN

Stress-strain (cond.)



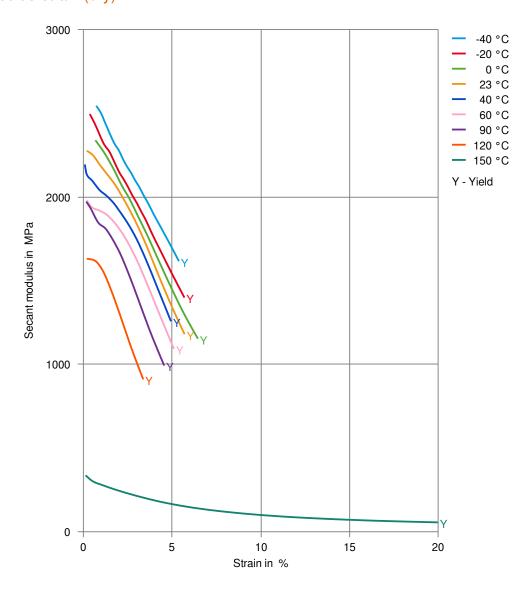
Printed: 2025-05-30 Page: 7 of 12





HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (dry)



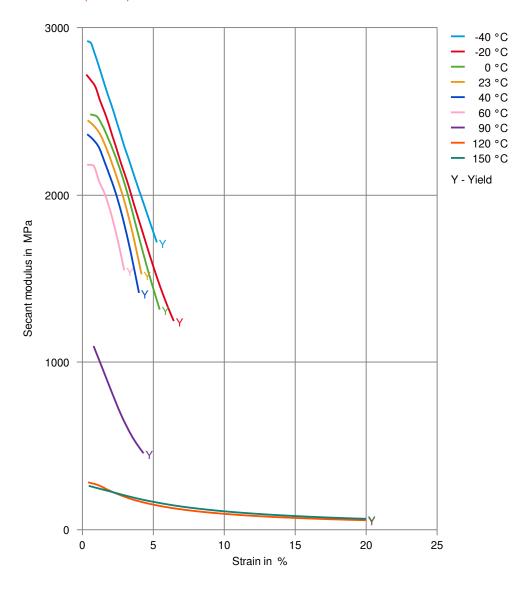
Printed: 2025-05-30 Page: 8 of 12





HIGH PERFORMANCE POLYAMIDE RESIN

Secant modulus-strain (cond.)

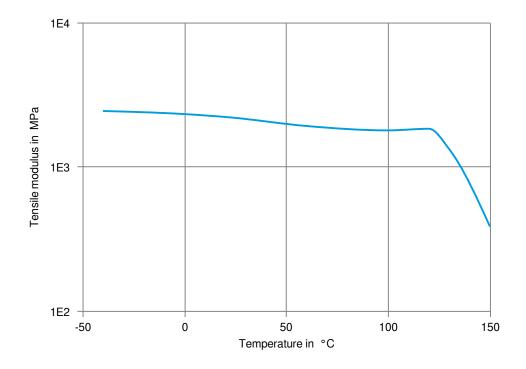


Printed: 2025-05-30 Page: 9 of 12





Tensile modulus-temperature (dry)

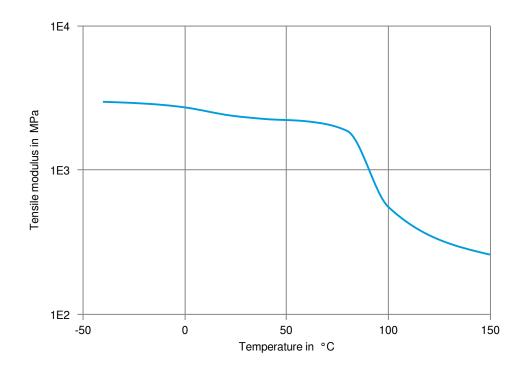


Printed: 2025-05-30 Page: 10 of 12





Tensile modulus-temperature (cond.)



Printed: 2025-05-30 Page: 11 of 12





Chemical Media Resistance

Mineral oils

- ✓ SAE 10W40 multigrade motor oil, 23°C
- ✓ SAE 10W40 multigrade motor oil, 130°C

Other

✓ Ethylene Glycol (50% by mass) in water, 108°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).

Printed: 2025-05-30 Page: 12 of 12

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

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