Zytel® HTN51G35HSL BK083

PA6T/XT-GF35

Celanese

Product Texts

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® HTN51G35HSL BK083 is a 35% glass reinforced, heat stabilized, lubricated, hydrolysis resistant high performance polyamide resin. It is also a PPA resin.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**0.2 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.6 / ***	%	ISO 294-4, 2577
[C] Spec. heat capacity of melt	**1820**	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**12000 / 11500**	MPa	ISO 527
[C] Stress at break	**230 / 210**	MPa	ISO 527
[C] Strain at break	**2.4 / 2.3**	%	ISO 527
[C] Charpy impact strength, +23°C	**60 / -**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**60 / 40**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**10 / -**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**10 / 9**	kJ/m²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Temp. of deflection under load, 1.80 MPa	**264 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**284 / ***	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**19 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**60 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Burning rate, FMVSS, Thickness 1 mm	**21**	mm/min	ISO 3795 (FMVSS 302)
[C] Oxygen index	**26 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**4 / -**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3.8 / -**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**90 / -**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**170 / -**	E-4	IEC 62631-2-1
[C] Volume resistivity	**>1E13 / -**	Ohm*m	IEC 62631-3-1
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**4 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**1.4 / ***	%	Sim. to ISO 62

[C] Density	**1470 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Material specific properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Viscosity number	**100 / ***	cm³/g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing	**Chemical Resistance**
Injection Molding	General Chemical Resistance, Hydrolytically Stable
Additives	**Applications**
Lubricants	Automotive, Electrical and Electronical
Special Characteristics	**Regional Availability**
Heat stabilized or stable to heat	North America, Europe, Asia Pacific, South and Central America

Other text 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.

When lower mold temperatures are used, the initial warpage and shrinkage may be lower, but the surface appearance and chemical resistance may be reduced, and the dimensional change may be greater when parts are subsequently heated.