

DuPont™ Zytel® HTN53G50LWSF BK702A

HIGH PERFORMANCE POLYAMIDE RESIN

Product Information

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® HTN53G50LWSF BK702A is a 50% glass reinforced, heat stabilized, lubricated high performance polyamide resin with low warpage developed for moderate temperature requiring retention of high impact and stiffness.

Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	0.1 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.3 / -	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	17000 / 16000	MPa	ISO 527-1/-2
Stress at break	270 / 210	MPa	ISO 527-1/-2
Strain at break	2.4 / 2.6	%	ISO 527-1/-2
Tensile creep modulus			ISO 899-1
1h	* / 11000	MPa	
1000h	* / 8000	MPa	
Charpy impact strength			ISO 179/1eU
73°F	90 / 90	kJ/m ²	
-22°F	90 / 90	kJ/m ²	
Charpy notched impact strength			ISO 179/1eA
73°F	15 / 16	kJ/m ²	
-22°F	14 / 16	kJ/m ²	
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, first heat	260 / *	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	250 / *	°C	
65 psi	255 / *	°C	
Coeff. of linear therm. expansion, parallel	19 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	59 / *	E-6/K	ISO 11359-1/-2
RTI, electrical			UL 746B
30mil	65 / *	°C	
120mil	65	°C	
RTI, impact			UL 746B
30mil	65	°C	
120mil	65	°C	
RTI, strength			UL 746B
30mil	65	°C	
120mil	65	°C	
Flammability	dry / cond	Unit	Test Standard
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	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<100	mm/min	ISO 3795 (FMVSS 302)
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	>1E13 / -	Ohm*m	IEC 60093
Surface resistivity	* / >1E15	Ohm	IEC 60093
Comparative tracking index	550 / -	-	IEC 60112

To find out more, visit [DuPont Performance Polymers](#) or contact nearest DuPont location.

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Other properties	dry / cond	Unit	Test Standard
Density	1580 / -	kg/m ³	ISO 1183
Injection	Value	Unit	Test Standard
Drying Recommended	yes	-	-
Drying Temperature	100	°C	-
Drying Time, Dehumidified Dryer	6 - 8	h	-
Processing Moisture Content	≤0.1	%	-
Melt Temperature Optimum	290	°C	-
Min. melt temperature	280	°C	-
Max. melt temperature	300	°C	-
Min. mold temperature	90	°C	-
Max. mold temperature	110	°C	-

Characteristics	
Processing	• Injection Molding
Delivery form	• Pellets
Additives	• Release agent
Special characteristics	• Heat stabilized or stable to heat

Processing Texts

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.

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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