Zytel® HTNFG52G35HSL BK011 (PRELIMINARY)

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® HTNFG52G35HSL BK011 is a 35% glass reinforced, lubricated, heat stabilised high performance polyamide resin, developed for consideration into applications for the food industry. It is also a PPA resin.

FOOD CONTACT

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in Europe and the USA when meeting applicable use conditions. For details, individual compliance statements are available from your DuPont representative.

Product information

Resin Identification	PA6T/66-GF35	ISO 1043
Part Marking Code	>PA6T/66-GF35<	ISO 11469
Part Marking Code	>PPA-GF35<	SAE J1344
ISO designation	ISO 16396-PA6T/66,GF35,M1CGHR,S10-120	

Rheological properties

	dry/cond.		
Moulding shrinkage, parallel	0.2/-	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.8/-	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile Modulus	12000/12000	MPa	ISO 527-1/-2
Stress at break	200/180	MPa	ISO 527-1/-2
Strain at break	1.8/2.2	%	ISO 527-1/-2
Charpy impact strength, 23°C	38/38	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	8/8	kJ/m²	ISO 179/1eA
Poisson's ratio	0.33/0.33	-	

Thermal properties

	dry/cond.		
Melting temperature, first heat	310/*	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	285/*	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	20/*	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	60/*	E-6/K	ISO 11359-1/-2
RTI, electrical, 0.75mm	150	°C	UL 746B
RTI, electrical, 1.5mm	150	°C	UL 746B
RTI, electrical, 3mm	150	°C	UL 746B
RTI, impact, 0.75mm	125	°C	UL 746B

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RTI, impact, 1.5mm	125	°C	UL 746B
RTI, impact, 3mm	125	°C	UL 746B
RTI, strength, 0.75mm	130	°C	UL 746B
RTI, strength, 1.5mm	140/*	°C	UL 746B
RTI, strength, 3mm	150	°C	UL 746B

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB/*	class	IEC 60695-11-10
Thickness tested	1.5/*	mm	IEC 60695-11-10
UL recognition	yes/*	-	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
Oxygen index	25/*	%	ISO 4589-1/-2
FMVSS Class	B	-	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

Other properties

	dry/cond.		
Humidity absorption, 2mm	2/*	%	Sim. to ISO 62
Density	1450/-	kg/m³	ISO 1183
Density of melt	1100	kg/m³	
Water Absorption, Immersion 24h	0.4/*[DS]	%	Sim. to ISO 62

[DS]: Derived from similar grade

Injection

Drying Recommended	yes	
Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	6 - 8	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	325	°C
Min. melt temperature	320	°C
Max. melt temperature	330	°C
Min. mould temperature	90	°C
Max. mould temperature	110	°C

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.

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