Zytel® HTNFR55G55NHLW BK337 (DEVELOPMENTAL)
HIGH PERFORMANCE POLYAMIDE RESIN

Zytel® HTNFR55G55NHLW BK337 is a 57% glass reinforced, flame retardant high performance polyamide resin with improved flow and low warpage in structural applications. It is also a PPA resin and uses a non-halogenated flame retardant.

Product information

Part Marking Code	>PPA-GF57FR<		SAE J1344

Rheological properties

	dry/cond.		
Moulding shrinkage, parallel	0.1 / -	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.2 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	21000 / -	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	220 / -	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.5 / -	%	ISO 527-1/-2
Flexural modulus	19500 / -	MPa	ISO 178
Flexural strength	330 / -	MPa	ISO 178
Charpy impact strength, 23°C	60 / -	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	15 / -	kJ/m²	ISO 179/1eA
Poisson's ratio	0.33 / -		

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	296 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	227 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	255 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel, -40-23°C	12.8 / *	E-6/K	ISO 11359-1/-2
CLTE, Parallel, 23-55°C(73-130°F)	13.4 / -	E-6/K	ASTM E 831
Coeff. of linear therm. expansion, parallel, 55-160°C	12.2 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal, -40-23°C	28 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal, 55-160°C	52.3 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, Normal,23-55°C (73-130°F)	30.7 / -	E-6/K	ASTM E 831

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94

Physical/Other properties

	dry/cond.		
Density	1720 / -	kg/m³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	6 - 8	h
Processing Moisture Content	≤0.1	%
Min. melt temperature	300	°C
Max. melt temperature	315	°C
Min. mould temperature	70	°C
Max. mould temperature	130	°C

Characteristics

Processing	Injection Moulding
Additives	Flame retardant, Non-halogenated/Red phosphorous free flame retardant
Special characteristics	Flame retardant

Additional information

Injection molding	For molding machine components, use corrosion resistant and wear resistant steel. For details please contact our representative. Limit the residence time of the resin in the machine. Use proper protective equipment and adequate ventilation.

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