

## Product Texts

Common features of Zytel® nylon resin include mechanical and physical properties such as high mechanical strength, excellent balance of stiffness and toughness, good high temperature performance, good electrical and flammability properties, good abrasion and chemical resistance. In addition, Zytel® nylon resins are available in different modified and reinforced grades to create a wide range of products with tailored properties for specific processes and end-uses. Zytel® nylon resin, including most flame retardant grades, offer the ability to be coloured.

The good melt stability of Zytel® nylon resin normally enables the recycling of properly handled production waste. If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-31 kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Zytel® nylon resin typically is used in demanding applications in the automotive, furniture, domestic appliances, sporting goods and construction industry.

**Zytel® 70G50HSLA BK039B is a 50% glass fiber reinforced, heat stabilized polyamide 66 resin for injection molding. It has excellent flow characteristics.**

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	0.8 / *	%	ISO 294-4, 2577
<sup>[C]</sup> Density of melt	1400	kg/m <sup>3</sup>	-
<sup>[C]</sup> Thermal conductivity of melt	0.31	W/(m K)	-
<sup>[C]</sup> Spec. heat capacity of melt	1870	J/(kg K)	-
<sup>[C]</sup> Ejection temperature	210	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	17000 / 13000	MPa	ISO 527
<sup>[C]</sup> Stress at break	240 / 170	MPa	ISO 527
<sup>[C]</sup> Strain at break	2.4 / 3.5	%	ISO 527
<sup>[C]</sup> Tensile creep modulus, 1h	* / 10000	MPa	ISO 899-1
<sup>[C]</sup> Tensile creep modulus, 1000h	* / 8000	MPa	ISO 899-1
<sup>[C]</sup> Charpy impact strength, +23°C	90 / 95	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy impact strength, -30°C	90 / 90	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	15 / 20	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Charpy notched impact strength, -30°C	15 / 14	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Puncture energy, +23°C	10 / -	J	ISO 6603-2

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	262 / *	°C	ISO 11357-1/-3
<sup>[C]</sup> Glass transition temperature, 10°C/min	65 / *	°C	ISO 11357-1/-2
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	255 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	261 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Vicat softening temperature, B	255 / *	°C	ISO 306
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	9 / *	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, normal	72 / *	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
Yellow Card available	yes / *	-	-
<sup>[C]</sup> Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-
Yellow Card available	yes / *	-	-
<sup>[C]</sup> Oxygen index	24 / *	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Volume resistivity	1E13 / -	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Surface resistivity	* / 4E14	Ohm	IEC 62631-3-2
<sup>[C]</sup> Electric strength	30 / -	kV/mm	IEC 60243-1
<sup>[C]</sup> Comparative tracking index	500 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
<sup>[C]</sup> Water absorption	4.2 / *	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	1.2 / *	%	Sim. to ISO 62
<sup>[C]</sup> Density	1570 / -	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Viscosity number	105 / *	cm <sup>3</sup> /g	ISO 307, 1157, 1628

[C]: CAMPUS

## Characteristics

### Processing

Injection Molding

### Special Characteristics

Heat stabilized or stable to heat

### Delivery form

Pellets, Black

### Regional Availability

North America, Europe, Asia Pacific, South and Central America

### Additives

Lubricants, Release agent