

## 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® 73G15L NC010 is a 15% glass fiber reinforced polyamide 6 resin for injection molding.**

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	1070	kg/m <sup>3</sup>	-
<sup>[C]</sup> Thermal conductivity of melt	0.19	W/(m K)	-
<sup>[C]</sup> Spec. heat capacity of melt	2470	J/(kg K)	-

**ASTM Data**

Mold Shrinkage, MD	0.003	mm/mm	ASTM D 955
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[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	6000 / 3500	MPa	ISO 527
<sup>[C]</sup> Stress at break	140 / 70	MPa	ISO 527
<sup>[C]</sup> Strain at break	4 / 10	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	50 / 95	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy impact strength, -30°C	45 / 54	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	7 / 15	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Charpy notched impact strength, -30°C	6 / 14	kJ/m <sup>2</sup>	ISO 179/1eA

**ASTM Data**

Tensile Strength	128 / -	MPa	ASTM D 638
Elongation at Break	3.5 / -	%	ASTM D 638
Flexural Modulus	5380 / -	MPa	ASTM D 790
Izod Impact notched, 1/8 in	53 / -	J/m	ASTM D 256

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	221 / *	°C	ISO 11357-1/-3
<sup>[C]</sup> Glass transition temperature, 10°C/min	55 / *	°C	ISO 11357-1/-2
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	200 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	220 / *	°C	ISO 75-1/-2
<sup>[C]</sup> Vicat softening temperature, B	215 / *	°C	ISO 306
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	37 / *	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, normal	109 / *	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	1.5 / *	mm	-
Yellow Card available	yes / *	-	-
<sup>[C]</sup> Burning rate, FMVSS, Thickness 1 mm	25	mm/min	ISO 3795 (FMVSS 302)
<sup>[C]</sup> Oxygen index	21 / *	%	ISO 4589-1/-2

**ASTM Data**

UL 94 Flame rating	<b>HB</b>	-	UL 94
Thickness tested	<b>1.5</b>	mm	-
DTUL @ 66 psi	<b>220</b>	°C	ASTM D 648
DTUL @ 264 psi	<b>200</b>	°C	ASTM D 648

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
<sup>[C]</sup> Water absorption	<b>7.6 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>2.5 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1230 / -</b>	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	<b>139 / *</b>	cm <sup>3</sup> /g	ISO 307, 1157, 1628

[C]: CAMPUS

**Characteristics**

**Processing**

Injection Molding

**Delivery form**

Pellets, Natural Color

**Additives**

Lubricants, Release agent

**Features**

Weldable

**Applications**

General Purpose, Sports Equipment

**Regional Availability**

North America, Europe, Asia Pacific, South and Central America, Near East/Africa