

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® 103FHSA NC010 is a heat stabilized, lubricated Polyamide 66 for injection molding.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	1.4 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.3 / *	%	ISO 294-4, 2577
^[C] Density of melt	1010	kg/m ³	-
^[C] Thermal conductivity of melt	0.16	W/(m K)	-
^[C] Spec. heat capacity of melt	2790	J/(kg K)	-
^[C] Eff. thermal diffusivity	5E-8	m ² /s	-
^[C] Ejection temperature	200	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	3100 / 1400	MPa	ISO 527
^[C] Yield stress	85 / 55	MPa	ISO 527
^[C] Yield strain	4.5 / 23	%	ISO 527
^[C] Nominal strain at break	16 / >50	%	ISO 527
^[C] Tensile creep modulus, 1h	* / 1300	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	* / 750	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	5 / 7	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	263 / *	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	60 / *	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	70 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	200 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	100 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	110 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	V-2 / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
^[C] Burning Behav. at thickness h	V-2 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 1MHz	3.5 / -	-	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	165 / -	E-4	IEC 62631-2-1
^[C] Volume resistivity	1E12 / 1E9	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E10	Ohm	IEC 62631-3-2
^[C] Electric strength	31 / -	kV/mm	IEC 60243-1

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	8.5 / *	%	Sim. to ISO 62
^[C] Humidity absorption	2.6 / *	%	Sim. to ISO 62
^[C] Density	1140 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	143 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Special Characteristics

Heat stabilized or stable to heat

Delivery form

Pellets, Natural Color

Regional Availability

Europe

Additives

Lubricants, Release agent