

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® 80G14A NC010A is a 14% glass fiber reinforced, toughened, UV stabilized, high flow polyamide 66 resin. It offers outstanding performance in injection molding applications.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.4 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.8 / *	%	ISO 294-4, 2577
^[C] Thermal conductivity of melt	0.19	W/(m K)	-
^[C] Spec. heat capacity of melt	2350	J/(kg K)	-
^[C] Eff. thermal diffusivity	8.09E-8	m ² /s	-
^[C] Ejection temperature	210	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	4800 / 3400	MPa	ISO 527
^[C] Stress at break	108 / 66	MPa	ISO 527
^[C] Strain at break	3.8 / 10	%	ISO 527
^[C] Tensile creep modulus, 1h	* / 3100	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	* / 2500	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	70 / 76	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	90 / 71	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	13 / 17	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	10 / 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	75 / *	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	240 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	258 / *	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	215 / *	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	40 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	120 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn. Thickness tested	HB / *	class	IEC 60695-11-10
^[C] Burning Behav. at thickness h Thickness tested	1.5 / *	mm	-
^[C] Burning Behav. at thickness h Thickness tested	HB / *	class	IEC 60695-11-10
^[C] Burning rate, FMVSS, Thickness 1 mm	0.8 / *	mm	-
^[C] Burning rate, FMVSS, Thickness 1 mm	44	mm/min	ISO 3795 (FMVSS 302)
^[C] Oxygen index	21 / *	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	3.8 / 7.3	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.5 / 3.9	-	IEC 62631-2-1

[C] Dissipation factor, 100Hz	270 / 180	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	580 / 580	E-4	IEC 62631-2-1
[C] Volume resistivity	>1E13 / 1E10	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
[C] Electric strength	36 / 36.5	kV/mm	IEC 60243-1
[C] Comparative tracking index	600 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	6.2 / *	%	Sim. to ISO 62
[C] Humidity absorption	1.8 / *	%	Sim. to ISO 62
[C] Density	1190 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Delivery form

Pellets, Natural Color

Additives

Release agent

Special Characteristics

High impact or impact modified, U.V. stabilized or stable to weather

Regional Availability

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