

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® 70G30HSLR BK099 is a 30% glass fiber reinforced, heat stabilized, hydrolysis resistant polyamide 66 resin for injection molding.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.0 / *	%	ISO 294-4, 2577
^[C] Thermal conductivity of melt	0.21	W/(m K)	-
^[C] Spec. heat capacity of melt	2290	J/(kg K)	-
^[C] Ejection temperature	210	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	10000 / 7000	MPa	ISO 527
^[C] Stress at break	200 / 130	MPa	ISO 527
^[C] Strain at break	3 / 5	%	ISO 527
^[C] Charpy impact strength, +23°C	70 / 80	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	70 / 70	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	12 / 15	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	9 / 9	kJ/m ²	ISO 179/1eA

ASTM Data

Tensile Strength	180 / -	MPa	ASTM D 638
Elongation at Break	3 / -	%	ASTM D 638
Flexural Modulus	8275 / -	MPa	ASTM D 790
Izod Impact notched, 1/8 in	110 / -	J/m	ASTM D 256

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	262 / *	°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	253 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	261 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	22 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	80 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Burning rate, FMVSS, Thickness 1 mm	37	mm/min	ISO 3795 (FMVSS 302)
^[C] Oxygen index	24 / *	%	ISO 4589-1/-2
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	1.5	mm	-

DTUL @ 264 psi	248	°C	ASTM D 648
Melting Temperature	263	°C	ASTM D 3418

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Volume resistivity	>1E13 / 1E9	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
^[C] Electric strength	38 / 32	kV/mm	IEC 60243-1
^[C] Comparative tracking index	400 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	6 / *	%	Sim. to ISO 62
^[C] Humidity absorption	1.9 / *	%	Sim. to ISO 62
^[C] Density	1370 / -	kg/m ³	ISO 1183
Density	1370	kg/m ³	ASTM D 792

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	150 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Delivery form

Pellets, Black

Additives

Lubricants, Release agent

Special Characteristics

Heat stabilized or stable to heat

Features

Creep Resistance, Fatigue Resistance, Thermal Stability

Chemical Resistance

General Chemical Resistance, Grease Resistance, Hydrolytically Stable, Oil Resistance

Applications

Automotive, Electrical and Electronical

Regional Availability

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