

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 (-31kJ/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® 80G43HS1L BK104 is a 43% glass fiber reinforced, heat stabilized, black polyamide 66 resin with superior impact resistance.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.2 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.6 / *	%	ISO 294-4, 2577
^[C] Density of melt	1270	kg/m ³	-
^[C] Ejection temperature	195	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	12300 / 8600	MPa	ISO 527
^[C] Stress at break	176 / 127	MPa	ISO 527
^[C] Strain at break	3.3 / 6.6	%	ISO 527
^[C] Charpy impact strength, +23°C	90 / -	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	23 / -	kJ/m ²	ISO 179/1eA

ASTM Data

Tensile Strength	152 / -	MPa	ASTM D 638
Elongation at Break	3 / -	%	ASTM D 638
Flexural Modulus	9650 / -	MPa	ASTM D 790
Flexural Strength	228 / -	MPa	ASTM D 790
Izod Impact notched, 1/8 in	235 / -	J/m	ASTM D 256

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	260 / *	°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	250 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	261 / *	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	215 / *	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	15 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	108 / *	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	-
^[C] Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-
^[C] Oxygen index	27 / *	%	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	260	°C	ASTM D 3418

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Volume resistivity	>1E13 / 1E12	Ohm*m	IEC 62631-3-1
^[C] Comparative tracking index	600 / -	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Humidity absorption	1.5 / *	%	Sim. to ISO 62
^[C] Density	1430 / -	kg/m ³	ISO 1183
Density	1430	kg/m ³	ASTM D 792

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	140 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding

Delivery form

Pellets, Black

Additives

Lubricants, Release agent

Special Characteristics

High impact or impact modified, Heat stabilized or stable to heat

Applications

Automotive, Sports Equipment

Regional Availability

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