

Product Texts

ASTM D6779 PA012G30 A53480

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® 70G30HSL BK039B is a 30% glass reinforced, heat stabilized, black nylon 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	1.1 / *	%	ISO 294-4, 2577
^[C] Density of melt	1200	kg/m ³	-
^[C] Thermal conductivity of melt	0.21	W/(m K)	-
^[C] Spec. heat capacity of melt	2290	J/(kg K)	-
^[C] Eff. thermal diffusivity	7E-8	m ² /s	-
^[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	190 / 120	MPa	ISO 527
^[C] Strain at break	3 / 5	%	ISO 527
^[C] Tensile creep modulus, 1h	* / 6800	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	* / 5100	MPa	ISO 899-1
^[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	10 / 12	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	9 / 9	kJ/m ²	ISO 179/1eA
^[C] Puncture - maximum force, +23°C	970 / -	N	ISO 6603-2
^[C] Puncture energy, +23°C	4.5 / -	J	ISO 6603-2

[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	250 / *	°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	250 / *	°C	ISO 306
^[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	0.4 / *	mm	-
^[C] Burning rate, FMVSS, Thickness 1 mm	22	mm/min	ISO 3795 (FMVSS 302)
^[C] Oxygen index	24 / *	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.4 / 11	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	4.1 / 4.6	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	70 / 4600	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	150 / 650	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13 / 1E9	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E13	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

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	148 / *	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

Regional Availability

Europe