

Product Texts

ISO 1043: PA6-HI

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® ST7301 NC010 is a Super Tough, heat stabilized, lubricated polyamide 6 resin for injection molding and extrusion. It offers outstanding impact resistance over a wide temperature and humidity range and high productivity.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	1.0 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.0 / *	%	ISO 294-4, 2577
^[C] Density of melt	960	kg/m ³	-
^[C] Thermal conductivity of melt	0.15	W/(m K)	-
^[C] Spec. heat capacity of melt	2600	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	1800 / 550	MPa	ISO 527
^[C] Yield stress	48 / 29	MPa	ISO 527
^[C] Yield strain	4 / 30	%	ISO 527
^[C] Nominal strain at break	>50 / >50	%	ISO 527
^[C] Tensile creep modulus, 1000h	* / 320	MPa	ISO 899-1
^[C] Charpy impact strength, +23°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	80 / 120	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	17 / 18	kJ/m ²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	221 / *	°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	51 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	95 / *	°C	ISO 75-1/-2

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Humidity absorption	2.7 / *	%	Sim. to ISO 62
^[C] Density	1060 / -	kg/m ³	ISO 1183

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	160 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics**Processing**

Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion, Coating, Casting

Delivery form

Pellets

Additives

Lubricants, Release agent

Special Characteristics

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

Chemical Resistance

General Chemical Resistance

Applications

Automotive, Sports Equipment

Regional Availability

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