Zytel® ST801 NC010A

PA66-I Celanese

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® ST801 NC010A is an unreinforced, super tough polyamide 66 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	**1.8 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.4 / ***	%	ISO 294-4, 2577
[C] Ejection temperature	**190**	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**2000 / 900**	MPa	ISO 527
[C] Yield stress	**50 / 43**	MPa	ISO 527
[C] Yield strain	**5.7 / 37**	%	ISO 527
[C] Nominal strain at break	**32 / >50**	%	ISO 527
[C] Tensile creep modulus, 1h	*** / 1200**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	*** / 750**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**N / N**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**N / N**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**80 / 115**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**18 / 17**	kJ/m²	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	**64 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**132 / ***	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**120 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**90 / ***	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	**26**	mm/min	ISO 3795 (FMVSS 302)
[C] Oxygen index	**20 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**3.2 / 8**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**2.9 / 3.6**	-	IEC 62631-2-1

[C] Dissipation factor, 100Hz	**80 / 1800**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**140 / 550**	E-4	IEC 62631-2-1
[C] Volume resistivity	**1E13 / 1E11**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / >1E15**	Ohm	IEC 62631-3-2
[C] Electric strength	**31 / -**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**6.5 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**2 / ***	%	Sim. to ISO 62
[C] Density	**1080 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Characteristics

Processing
Injection Molding, Other Extrusion

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

Chemical Resistance
General Chemical Resistance

Applications
Automotive, Sports Equipment

Regional Availability
Europe