Zytel® FR70M30V0 NC010

PA66-MD30 FR(17) 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® FR70M30V0 NC010 is a 30% mineral reinforced, flame retardant polyamide 66 resin for injection molding.

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	**1400**	kg/m³	-
[C] Thermal conductivity of melt	**0.23**	W/(m K)	-
[C] Spec. heat capacity of melt	**1700**	J/(kg K)	-
[C] Ejection temperature	**210**	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**6500 / 3500**	MPa	ISO 527
[C] Stress at break	**73 / 50**	MPa	ISO 527
[C] Strain at break	**2 / 6**	%	ISO 527
[C] Charpy impact strength, +23°C	**20 / 30**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**20 / 19**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**2.5 / 3**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**2 / 2**	kJ/m²	ISO 179/1eA
ASTM Data			
Tensile Strength	**73 / -**	MPa	ASTM D 638
Elongation at Break	**2 / -**	%	ASTM D 638
Flexural Modulus	**6550 / -**	MPa	ASTM D 790
Flexural Strength	**115 / -**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**27 / -**	J/m	ASTM D 256

[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	**80 / ***	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**145 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**238 / ***	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**235 / ***	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**64 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**81 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**V-0 / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Burning Behav. at thickness h	**V-2 / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Burning Behav. 5V at thickness h	**5VA / ***	class	IEC 60695-11-20
Thickness tested	**1.5 / ***	mm	-
Yellow Card available	**yes / ***	-	-

ASTM Data			
UL 94 Flame rating	**V-0**	-	UL 94
Thickness tested	**1.5**	mm	-
DTUL @ 264 psi	**154**	°C	ASTM D 648
Melting Temperature	**260**	°C	ASTM D 3418
Limiting Oxygen Index	**38**	%	ASTM D 2863

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	**4.1 / 9.1**	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	**3.7 / 4.2**	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	**140 / 410**	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**140 / 500**	E-4	IEC 62631-2-1
[C] Volume resistivity	**>1E13 / 1E9**	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	*** / >1E15**	Ohm	IEC 62631-3-2
[C] Electric strength	**40 / 33**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**325 / -**	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	**16 / -**	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	**0.014 / -**	-	ASTM D 150
Dielectric Constant, 1 MHz	**3.7 / -**	-	ASTM D 150
Surface Resistivity	*** / 1E15**	Ohm	ASTM D 257
Volume Resistivity	**1E14 / -**	Ohm*cm	ASTM D 257

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Water absorption	**4 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**1.3 / ***	%	Sim. to ISO 62
[C] Density	**1620 / -**	kg/m³	ISO 1183
Density	**1620**	kg/m³	ASTM D 792

[C]: CAMPUS

Characteristics

Processing
Injection Molding

Delivery form
Pellets, Natural Color

Additives
Release agent

Special Characteristics
Flame retardant

Features
Low Warpage, Weldable

Chemical Resistance
General Chemical Resistance

Applications
Automotive, Electrical and Electronical

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