

Product Texts

Zytel® LCPA long chain polyamide resins provide an innovative and growing portfolio of flexible polymers with excellent thermal, chemical, and hydrolysis resistance. The diverse selection of Zytel® LCPA grades is targeted for a range of performance characteristics, balancing temperature resistance, flexibility and low permeation.

Zytel® 151L NC010 is a lubricated polyamide 612 resin.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	1.3 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.4 / *	%	ISO 294-4, 2577
^[C] Density of melt	900	kg/m ³	-
^[C] Thermal conductivity of melt	0.18	W/(m K)	-
^[C] Spec. heat capacity of melt	2750	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	2400 / 1700	MPa	ISO 527
^[C] Yield stress	62 / 54	MPa	ISO 527
^[C] Yield strain	4.5 / 18	%	ISO 527
^[C] Nominal strain at break	17 / >50	%	ISO 527
^[C] Charpy impact strength, +23°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	N / 40	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	3.5 / 4	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	3.5 / 3	kJ/m ²	ISO 179/1eA

ASTM Data			
Tensile Strength	61 / -	MPa	ASTM D 638
Tensile Strength at Yield	61 / -	MPa	ASTM D 638
Elongation at Yield	7 / -	%	ASTM D 638
Elongation at Break	100 / -	%	ASTM D 638
Flexural Modulus	2030 / -	MPa	ASTM D 790
Rockwell Hardness	R 114 /	-	ASTM D 785
Izod Impact notched, 1/8 in	43 / -	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	32 / -	J/m	ASTM D 256
Temperature	-40	°C	-

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	218 / *	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	65 / *	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	62 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	135 / *	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	181 / *	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	110 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	120 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	V-2 / *	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] Oxygen index	27 / *	%	ISO 4589-1/-2
ASTM Data			
UL 94 Flame rating	V-2	-	UL 94
Thickness tested	1.5	mm	-
DTUL @ 264 psi	55	°C	ASTM D 648

Melting Temperature	218	°C	ASTM D 3418
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[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	3.6 / 5.1	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.2 / 4	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	135 / 700	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	160 / 400	E-4	IEC 62631-2-1
^[C] Volume resistivity	1E13 / 1E11	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
^[C] Electric strength	30 / 30	kV/mm	IEC 60243-1
^[C] Comparative tracking index	600 / -	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	14.2 / -	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.02 / -	-	ASTM D 150
Volume Resistivity	1E15 / -	Ohm*cm	ASTM D 257

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	3 / *	%	Sim. to ISO 62
^[C] Humidity absorption	1.3 / *	%	Sim. to ISO 62
^[C] Density	1060 / -	kg/m ³	ISO 1183
Water Absorption, 24hr	0.25	%	ASTM D 570
Density	1060	kg/m ³	ASTM D 792

[C]: CAMPUS

Film Properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Strain at yield, parallel	4.5 / *	%	ISO 527-3

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	95 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding, Other Extrusion

Delivery form

Pellets, Natural Color

Additives

Lubricants, Release agent

Features

Weldable

Chemical Resistance

General Chemical Resistance

Applications

Electrical and Electronical

Regional Availability

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

Other text information

Other extrusion

Melt Viscosity

@235°C, 1000s-1 = 70 Pa.s