

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® 158L NC010 is an intermediate viscosity, lubricated polyamide 612 resin that is suitable for molding and extrusion applications.

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	0.19	W/(m K)	-
^[C] Spec. heat capacity of melt	2800	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	2400 / 1500	MPa	ISO 527
^[C] Yield stress	62 / 52	MPa	ISO 527
^[C] Yield strain	4.5 / 19	%	ISO 527
^[C] Nominal strain at break	35 / >50	%	ISO 527
^[C] Charpy impact strength, +23°C	N / N	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	N / -	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	4 / 6	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	5 / 4	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	150 / -	%	ASTM D 638
Flexural Modulus	2030 / -	MPa	ASTM D 790
Rockwell Hardness	R 114 /	-	ASTM D 785
Izod Impact notched, 1/8 in	53 / -	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	48 / -	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	60 / *	°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] Coeff. of linear therm. expansion, parallel	120 / *	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.	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	0.9 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Oxygen index	25 / *	%	ISO 4589-1/-2
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	1.5	mm	-
DTUL @ 264 psi	55	°C	ASTM D 648
Melting Temperature	218	°C	ASTM D 3418

Limiting Oxygen Index	25	%	ASTM D 2863
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[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	3.6 / -	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	3.2 / -	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	140 / -	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	160 / -	E-4	IEC 62631-2-1
^[C] Volume resistivity	>1E13 / -	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / >1E15	Ohm	IEC 62631-3-2
^[C] Electric strength	36 / 36	kV/mm	IEC 60243-1
ASTM Data			
Dissipation Factor, 1 MHz	0.02 / -	-	ASTM D 150
Dielectric Constant, 1 MHz	3.5 / -	-	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

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	120 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics

Processing

Injection Molding, Film Extrusion, Pipe/Tube Extrusion, Profile Extrusion, Sheet Extrusion, Wire/Cable Extrusion, Other Extrusion, Coating, Blow Molding, Casting

Delivery form

Pellets, Natural Color

Additives

Lubricants, Release agent

Features

Weldable

Chemical Resistance

General Chemical Resistance

Applications

Automotive

Regional Availability

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