

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® 77G43L NC010 is a 43% glass fiber reinforced polyamide 612 resin for injection molding.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Molding shrinkage, parallel	0.3 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.8 / *	%	ISO 294-4, 2577
^[C] Ejection temperature	210	°C	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	12500 / 11500	MPa	ISO 527
^[C] Stress at break	200 / 165	MPa	ISO 527
^[C] Strain at break	3 / 5	%	ISO 527
^[C] Charpy impact strength, +23°C	100 / 100	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	85 / 80	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	17 / 14	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	17 / 13	kJ/m ²	ISO 179/1eA

ASTM Data

Tensile Strength	190 / -	MPa	ASTM D 638
Elongation at Break	3 / -	%	ASTM D 638
Flexural Modulus	11000 / -	MPa	ASTM D 790
Flexural Strength	269 / -	MPa	ASTM D 790
Rockwell Hardness	R 118 / -	-	ASTM D 785
Izod Impact notched, 1/8 in	170 / -	J/m	ASTM D 256

[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	203 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	217 / *	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	14 / *	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	110 / *	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	0.7 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Burning rate, FMVSS, Thickness 1 mm	21	mm/min	ISO 3795 (FMVSS 302)
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	1.5	mm	-
DTUL @ 66 psi	215	°C	ASTM D 648
DTUL @ 264 psi	205	°C	ASTM D 648
Melting Temperature	217	°C	ASTM D 3418

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 1MHz	3.6 / -	-	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	200 / -	E-4	IEC 62631-2-1

Zytel® 77G43L NC010

PA612-GF43

Celanese

^[C] Volume resistivity	1E13 / -	Ohm*m	IEC 62631-3-1
ASTM Data			
Dielectric Strength, Short Time	19.7 / -	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.02 / -	-	ASTM D 150
Dielectric Constant, 1 MHz	3.6 / -	-	ASTM D 150
Surface Resistivity	* / 1E15	Ohm	ASTM D 257
Volume Resistivity	1E15 / -	Ohm*cm	ASTM D 257

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	1.7 / *	%	Sim. to ISO 62
^[C] Humidity absorption	0.7 / *	%	Sim. to ISO 62
^[C] Density	1420 / -	kg/m ³	ISO 1183
Water Absorption, 24hr	0.14	%	ASTM D 570
Density	1420	kg/m ³	ASTM D 792

[C]: CAMPUS

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Viscosity number	145 / *	cm ³ /g	ISO 307, 1157, 1628

[C]: CAMPUS

Characteristics**Processing**

Injection Molding

Delivery form

Pellets, Natural Color

Additives

Lubricants, Release agent

Features

Weldable

Applications

Automotive, Electrical and Electronical

Regional Availability

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