DuPont™ Zytel® FG408L NC010

NYLON RESIN

Product Information
Zytel® FG408L is a medium toughened polyamide 66 for injection molding. It has high impact resistance at low temperature and dry as molded. It has been developed for consideration into applications such as parts for the food industry.

FOOD CONTACT

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in Europe and the USA when meeting applicable use conditions. For details, individual compliance statements are available from your DuPont representative.

General information	Value	Unit	Test Standard
Resin Identification	PA66-I	-	ISO 1043
Part Marking Code	PA66-I	-	ISO 11469
Rheological properties	**dry / cond**	**Unit**	**Test Standard**
Molding shrinkage, parallel	1.5 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.5 / -	%	ISO 294-4, 2577
Mechanical properties	**dry / cond**	**Unit**	**Test Standard**
Tensile Modulus	2200 / 1100	MPa	ISO 527-1/-2
Yield stress	61 / 43	MPa	ISO 527-1/-2
Yield strain	6 / 26	%	ISO 527-1/-2
Nominal strain at break	35 / >50	%	ISO 527-1/-2
Tensile creep modulus			ISO 899-1
1h	* / 950	MPa	
1000h	* / 840	MPa	
Charpy impact strength			ISO 179/1eU
73°F	N / N	kJ/m²	
-22°F	N / N	kJ/m²	
Charpy notched impact strength			ISO 179/1eA
73°F	15 / 25	kJ/m²	
-22°F	15 / 8	kJ/m²	
Thermal properties	**dry / cond**	**Unit**	**Test Standard**
Melting temperature, 18°F/min	263 / *	°C	ISO 11357-1/-3
Temp. of deflection under load			ISO 75-1/-2
260 psi	66 / *	°C	
65 psi	155 / *	°C	
Vicat softening temperature, 90°F/h, 11 lbf	210 / *	°C	ISO 306
Coeff. of linear therm. expansion, parallel	132 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	132 / *	E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.16	W/(m K)	-
Spec. heat capacity of melt	2600	J/(kg K)	-
RTI, electrical			UL 746B
30mil	65 / *	°C	
60mil	125 / *	°C	
120mil	125	°C	
RTI, impact			UL 746B
30mil	65	°C	
60mil	75 / *	°C	
120mil	75	°C	
RTI, strength			UL 746B
30mil	65	°C	
60mil	85 / *	°C	
120mil	85	°C	
Flammability	**dry / cond**	**Unit**	**Test Standard**
Burning Behav. at 60mil nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94

To find out more, visit DuPont Performance Polymers or contact nearest DuPont location.

North America **Asia Pacific** **Europe/Middle East/Africa**

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Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	mm	IEC 60695-11-10
UL recognition	yes / *	-	UL 94
Oxygen index	19 / *	%	ISO 4589-1/-2
FMVSS Class	B	-	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<100	mm/min	ISO 3795 (FMVSS 302)
Electrical properties	**dry / cond**	**Unit**	**Test Standard**
Relative permittivity			IEC 62631-2-1
100Hz	3.2 / 7	-	
1MHz	2.9 / 3.7	-	
Dissipation factor			IEC 62631-2-1
100Hz	200 / 1500	E-4	
1MHz	200 / 500	E-4	
Volume resistivity	>1E13 / 1E11	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E15	Ohm	IEC 62631-3-2
Electric strength	34 / -	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112
Other properties	**dry / cond**	**Unit**	**Test Standard**
Humidity absorption, 80mil	2.2 / *	%	Sim. to ISO 62
Water absorption, 80mil	7 / *	%	Sim. to ISO 62
Density	1090 / -	kg/m³	ISO 1183
Density of melt	950	kg/m³	-
Film Properties	**dry / cond**	**Unit**	**Test Standard**
Strain at yield, parallel	6 / *	%	ISO 527-3
VDA Properties	**Value**	**Unit**	**Test Standard**
Emission of organic compounds	35	µgC/g	VDA 277
Odor test	4	class	VDA 270
Injection	**dry / cond**	**Unit**	**Test Standard**
Drying Recommended	yes	-	-
Drying Temperature	≥80	°C	-
Drying Time, Dehumidified Dryer	2 - 4	h	-
Processing Moisture Content	≤0.2	%	-
Melt Temperature Optimum	290	°C	-
Min. melt temperature	280	°C	-
Max. melt temperature	300	°C	-
Max. screw tangential speed	0.3 / *	m/s	-
Mold Temperature Optimum	80	°C	-
Min. mold temperature	50	°C	-
Max. mold temperature	100	°C	-
Hold pressure range	50 - 100	MPa	-
Hold pressure time	4	s/mm	-
Ejection temperature	190	°C	-
Extrusion	**Value**	**Unit**	**Test Standard**
Drying Temperature	≤80	°C	-
Drying Time, Dehumidified Dryer	4 - 6	h	-
Processing Moisture Content	≤0.05	%	-
Melt Temperature Optimum	285	°C	-
Melt Temperature Range	280 - 290	°C	-

Characteristics			
Processing	• Injection Molding	• Profile Extrusion	
Delivery form	• Pellets		
Additives	• Release agent		
Regional Availability	• North America • Europe	• Asia Pacific • South and Central America	• Near East/Africa • Global

To find out more, visit DuPont Performance Polymers or contact nearest DuPont location.

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Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc. ISO Mechanical properties measured at 160 mil (Hytrel® measured at 80 mil), IEC Electrical properties measured at 80 mil, all ASTM properties measured at 120 mil, and test temperatures are 73°F unless otherwise stated.

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