

## DuPont Performance Polymers Zytel® FG101L NC010 Nylon 66 (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Nylon , Nylon 66

### Material Notes:

Zytel® FG101L NC010 is a lubricated polyamide 66 resin for injection molding. It has been developed for consideration into applications such as parts for the food industry. Information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Zytel-FG101L-NC010-Nylon-66-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-FG101L-NC010-Nylon-66-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in <sup>3</sup>	DAM; ISO 1183
Water Absorption	2.6 %	2.6 %	Equilibrium 50%RH; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	8.5 %	8.5 %	Saturation, immersed; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage	0.015 cm/cm	0.015 in/in	Flow; DAM
	@Thickness 3.20 mm	@Thickness 0.126 in	
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.014 cm/cm	0.014 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	59	59	50%RH; ISO 2039/2
	79	79	DAM; ISO 2039/2
Hardness, Rockwell R	108	108	50%RH; ISO 2039/2
	121	121	DAM; ISO 2039/2
Tensile Strength, Yield	55.0 MPa	7980 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	82.0 MPa	11900 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	25 %	25 %	DAM; nominal; ISO 527

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
	45 %	45 %	50mm/min; DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	>= 100 %	>= 100 %	50%RH; nominal; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	4.5 %	4.5 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	25 %	25 %	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	1.40 GPa	203 ksi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	3.10 GPa	450 ksi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	1.20 GPa	174 ksi	50%RH; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.80 GPa	406 ksi	DAM; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	40.0 J/cm <sup>2</sup>	190 ft-lb/in <sup>2</sup>	DAM; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	50%RH; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	50%RH; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	DAM; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.300 J/cm <sup>2</sup>	1.43 ft-lb/in <sup>2</sup>	50%RH; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.450 J/cm <sup>2</sup>	2.14 ft-lb/in <sup>2</sup>	DAM; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.550 J/cm <sup>2</sup>	2.62 ft-lb/in <sup>2</sup>	DAM; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	50%RH; ISO 179/1eA
Tensile Creep Modulus, 1 hour	1400 MPa @Temperature 23.0 °C	203000 psi @Temperature 73.4 °F	50%RH; ISO 899
Tensile Creep Modulus, 1000 hours	820 MPa @Temperature 23.0 °C	119000 psi @Temperature 73.4 °F	50%RH; ISO 899

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C @Temperature 23.0 - 55.0 °C	278 µin/in-°F @Temperature 73.4 - 131 °F	DAM; ISO 11359-1/-2
CTE, linear, Transverse to Flow	110 µm/m-°C @Temperature 23.0 - 55.0 °C	61.1 µin/in-°F @Temperature 73.4 - 131 °F	DAM; ISO 11359-1/-2
Melting Point	262 °C	504 °F	10°C/min; DAM; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	200 °C	392 °F	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	70.0 °C	158 °F	DAM; ISO 75-1/-2

Processing Properties	Metric	English	Comments
Melt Temperature	290 °C	554 °F	DAM; Optimum
	280 - 300 °C	536 - 572 °F	DAM
Mold Temperature	70.0 °C	158 °F	DAM; optimum
	50.0 - 90.0 °C	122 - 194 °F	DAM
Drying Temperature	80.0 °C	176 °F	DAM
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	DAM
Moisture Content	<= 0.20 %	<= 0.20 %	DAM

Descriptive Properties	Value	Comments
Appearance	Natural Color	DAM
Features	Food Contact Acceptable	DAM
	Lubricated	DAM

Forms Descriptive Properties	Pellets Value	DAM Comments
Generic	Nylon 66	DAM
Material Status	Current	DAM
Part Marking Code	>PA66<	ISO 11469; DAM
Processing Method	Injection Molding	DAM
Product Category	Food Contact Resins	DAM
	Unreinforced Resins	DAM
Region Available - Global	Yes	DAM
Resin Identification	PA66	ISO 1043; DAM
RoHS Compliance	Contact Manufacturer	DAM
Uses	Food Applications, Non-specific	DAM

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