

DuPont Performance Polymers Zytel® ST801 NC010A Nylon 66 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 66

Material Notes:

Zytel® ST801 is an unreinforced, super tough polyamide 66 for injection molding and extrusion. It offers outstanding break resistance over a wide temperature and humidity range and high productivity. Information provided by DuPont

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Zytel-ST801-NC010A-Nylon-66-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.08 g/cc	0.0390 lb/in ³	DAM; ISO 1183
Water Absorption	2.2 %	2.2 %	DAM; Equilibrium 50%RH; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	6.7 %	6.7 %	DAM; Saturation, immersed; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.017 cm/cm	0.017 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Tensile Stress	39.0 MPa	5660 psi	50%RH; ISO 527
	@Strain 50.0 %, Temperature 23.0 °C	@Strain 50.0 %, Temperature 73.4 °F	
Tensile Strength, Yield	43.0 MPa	6240 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	50.0 MPa	7250 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	32 %	32 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	>= 50 %	>= 50 %	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	5.7 %	5.7 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	37 %	37 %	50%RH; ISO 527

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Tensile Modulus	0.900 GPa	131 ksi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.00 GPa	290 ksi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	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 -30.0 °C	@Temperature -22.0 °F	
	NB	NB	DAM; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.70 J/cm ²	8.09 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.80 J/cm ²	8.57 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.00 J/cm ²	38.1 ft-lb/in ²	DAM; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	11.5 J/cm ²	54.7 ft-lb/in ²	50%RH; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1 hour	1200 MPa	174000 psi	50%RH; ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1000 hours	750 MPa	109000 psi	50%RH; ISO 899
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	120 µm/m-°C	66.7 µin/in-°F	DAM; ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	120 µm/m-°C	66.7 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	

Thermal Properties	Metric 90.0 µm/m-°C	English 50.0 µin/in-°F	Comments
CTE, linear, Transverse to Flow	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	DAM; ASTM E 831
	90.0 µm/m-°C	50.0 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Melting Point	263 °C	505 °F	DAM; 10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	132 °C	270 °F	DAM; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	64.0 °C	147 °F	DAM; ISO 75-1/-2
Glass Transition Temp, Tg	75.0 °C	167 °F	DAM; 10°C/min; ISO 11357-1/-2
UL RTI, Electrical	125 °C	257 °F	DAM; UL 746B
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	125 °C	257 °F	DAM; UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	125 °C	257 °F	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	75.0 °C	167 °F	DAM; UL 746B
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	75.0 °C	167 °F	DAM; UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	75.0 °C	167 °F	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	85.0 °C	185 °F	DAM; UL 746B
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	85.0 °C	185 °F	DAM; UL 746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	85.0 °C	185 °F	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	HB	HB	DAM; IEC 60695-11-10
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	HB	HB	

Thermal Properties	Metric @Thickness 0.810 mm	English @Thickness 0.0319 in	DAM; UL 94 Comments
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	DAM; IEC 60695-11-10
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	DAM; IEC 60695-11-10
	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	DAM; UL94
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	DAM; UL94
Oxygen Index	20 %	20 %	DAM; ISO 4589-1/-2
Glow Wire Test	650 °C @Thickness 3.00 mm	1200 °F @Thickness 0.118 in	DAM; Flammability Index; IEC 60695-2-12
	675 °C @Thickness 0.810 mm	1250 °F @Thickness 0.0319 in	DAM; Ignition Temp; IEC 60695-2-13
	675 °C @Thickness 1.50 mm	1250 °F @Thickness 0.0591 in	DAM; Ignition Temp; IEC 60695-2-13
	675 °C @Thickness 3.00 mm	1250 °F @Thickness 0.118 in	DAM; Ignition Temp; IEC 60695-2-13
	675 °C @Thickness 1.50 mm	1250 °F @Thickness 0.0591 in	DAM; Flammability Index; IEC 60695-2-12
	725 °C @Thickness 0.810 mm	1340 °F @Thickness 0.0319 in	DAM; Flammability Index; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm @Temperature 23.0 °C	1.00e+13 ohm-cm @Temperature 73.4 °F	50%RH; IEC 60093
	1.00e+15 ohm-cm @Temperature 23.0 °C	1.00e+15 ohm-cm @Temperature 73.4 °F	DAM; IEC 60093
Surface Resistance	>= 1.00e+15 ohm @Temperature 23.0 °C	>= 1.00e+15 ohm @Temperature 73.4 °F	50%RH; IEC 60093
	1.00e+15 ohm	1.00e+15 ohm	

Electrical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	DAM; IEC 60093 Comments
Dielectric Constant	2.9	2.9	
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	DAM; IEC 60250
	3.2	3.2	
	@Frequency 100 Hz, Temperature 23.0 °C	@Frequency 100 Hz, Temperature 73.4 °F	DAM; IEC 60250
	3.6	3.6	
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	50%RH; IEC 60250
Dielectric Strength	8.0	8.0	
	@Frequency 100 Hz, Temperature 23.0 °C	@Frequency 100 Hz, Temperature 73.4 °F	50%RH; IEC 60250
	31.0 kV/mm	787 kV/in	
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	DAM; IEC 60243-1
	39.0 kV/mm	991 kV/in	
	@Thickness 1.00 mm, Temperature 23.0 °C	@Thickness 0.0394 in, Temperature 73.4 °F	50%RH; IEC 60243-1
Dissipation Factor	0.0080	0.0080	
	@Frequency 100 Hz, Temperature 23.0 °C	@Frequency 100 Hz, Temperature 73.4 °F	DAM; IEC 60250
	0.014	0.014	
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	DAM; IEC 60250
	0.055	0.055	
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	50%RH; IEC 60250
	0.18	0.18	
	@Frequency 100 Hz, Temperature 23.0 °C	@Frequency 100 Hz, Temperature 73.4 °F	50%RH; IEC 60250
Comparative Tracking Index	600 V	600 V	
	@Temperature 23.0 °C	@Temperature 73.4 °F	DAM; IEC 60112
	>= 600 V	>= 600 V	
			DAM; UL 746A

Electrical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Processing Properties	Metric	English	Comments
Melt Temperature	290 °C	554 °F	DAM; optimum

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China