NYLON 6/6 POLYAMIDE (PA)
ZYTEL® 101F NC010 (Dry) (PA)
DuPont Engineering Polymers / Americas - Polymide 66

General-purpose nylon 6/6 has good toughness, tensile strength, and resistance to creep, particularly in the high temperature range. Nylon has excellent wear properties. low coefficient of friction, and exceptional chemical resistance to aromatic hydrocarbons, greases, and oils. Nylon is a hygroscopic material. Moisture acts as a plasticizer reducing the tensile strength, stiffness, and increasing elongation, impact strength, and energy absorbing characteristics. Outdoor weathering can be improved by the addition of carbon black. Nylon will perform well in long range service in most applications at temperatures as high as 185°F (85°C). Nylon is a translucent off white color.

APPLICATIONS

Fasteners - Bearings - Gears - Cams - Gaskets - Printed Circuit Board Hardware - Washers - Spacers - Insulators - Spiral Wrap - Flexible Grommeting - Wire Ties - Electronic Components - Bushings - Wiring Clips - Cable Clamps - Hole Plugs - Hose Clamps

Automotive Specifications

- CHEVROLET CMP NY001 AB
- CHRYSLER MSDB 41 CPN2012 Color: Color As Noted On Drawing
- FORD ESF-M4D150-A
- GM GMP PA66 005
- CHEVROLET CMP NY001 BB
- CHEVROLET CMP NY001 CB
- CHEVROLET CMP NY001 DB
- CHEVROLET CMP NY056 AA
- GM 6063M
- FORD WSK-M4D647-A
- TYCO 100-1422
- ASTM D4066 PA111

Approvals FDA 21CFR 177.1500

Properties

Physical	**Nominal Values (English)**	**Test Method**
Density - Specific Gavity	1.14 sp gr 23°/23°C	ASTM D792
Mold Shrink, Linear-Flow (0.125 in)	0.015 in/in	ASTM D955
Water Absorption @ 24 hrs (73°F)	1.2%	ASTM D570
Water Absorption @ Sat. (73°F)	8.5%	ASTM D570

Mechanical	**Nominal Values (English)**	**Test Method**
Tensile Strength (73°F)	12,000psi	ASTM D638
Tensile Strength @ Yield (73°F)	12,000psi	ASTM D638
Tensile Elongation @ Yield (73°F)	4.0%	ASTM D638
Tensile Elongation @ Break (73°F)	50.0%	ASTM D638
Flexural Modulus		ASTM D970
(73°F)	410,000psi	
(250°F)	78,000psi	
(170°F)	100,000psi	
(-40°F)	470,000psi	
Poisson's Ratio	0.4	ASTM E132

Impact	**Nominal Values (English)**	**Test Method**
Notched Izod Impact @ (73°F)	1.00 ft-lb/in	ASTM D256

Hardness	**Nominal Values (English)**	**Test Method**
Rockwell Hardness		ASTM D785
(M-Scale)	71	
(R-Scale)	113	

Thermal	**Nominal Values (English)**	**Test Method**
DTUL @ 264psi - Unannealed	149°F	ASTM D648
DTUL @ 66psi - Unannealed	410°F	ASTM D648
Brittle Temperature	-112°F	ASTM D746
Melting Point	505°F	
CLTE, Flow (TMA) (73°F to 130°F (23°C to 55°C))	5.5E-005 in/in/°F	ASTM E831
CLTE, Transverse (TMA) (73°F to 130°F (23°C to 55°	6.1E-005 in/in/°F	ASTM E831
Specific Heat	0.650 Btu/lb/°F	ASTM C351

Electrical	**Nominal Values (English)**	**Test Method**
Surface Resistivity	1.0E+014 ohms	ASTM D257
Volume Resistivity	1.0E+015 ohms-cm	ASTM D257
Dielectric Strength		ASTM D149
(0.0630 in)	590 V/mil	
(0.126 in)	420 V/mil	
Dielectric Constant		ASTM D150
(100 Hz)	4.100	
(1000 Hz)	4.000	
(1000000 Hz)	3.700	
Dissipation Factor		ASTM D150
(100 Hz)	0.010	
(1000 Hz)	0.020	
(1000000 Hz)	0.020	

Ignition Characteristics	**Nominal Values (English)**	**Test Method**
Flame Rating - UL		UL 94
(0.0591 in)	V-2	
(0.0280 in)	V-2	