

Zytel® 103HSL BKB080

NYLON RESIN

DuPont Performance Polymers

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

Unreinforced, Heat Stabilized, Polyamide 66

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Heat Stabilizer		
Features	• Heat Stabilized		
RoHS Compliance	• Contact Manufacturer		
Processing Method	• Coating	• Extrusion	• Injection Molding
Part Marking Code (ISO 11469)	• PA66		
Resin ID (ISO 1043)	• PA66		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.3	--	%	
Flow	1.3	--	%	
Viscosity Number				ISO 307
96% H ₂ SO ₄ (Sulphuric Acid)	150	--	cm ³ /g	

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	450000 (3100)	203000 (1400)	psi (MPa)	ISO 527-2
Tensile Stress (Yield)	12300 (85.0)	7980 (55.0)	psi (MPa)	ISO 527-2
Tensile Strain (Yield)	4.0	25	%	ISO 527-2
Nominal Tensile Strain at Break	20	> 50	%	ISO 527-2
Tensile Creep Modulus				ISO 899-1
1 hr	--	174000 (1200)	psi (MPa)	
1000 hr	--	94300 (650)	psi (MPa)	
Flexural Modulus ²	406000 (2800)	189000 (1300)	psi (MPa)	ISO 178
Poisson's Ratio	0.37	0.43		ISO 527

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F (-30°C)	1.4 (3.0)	1.4 (3.0)	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	2.6 (5.5)	5.7 (12)	ft·lb/in ² (kJ/m ²)	
Notched Izod Impact Strength ²				ISO 180/1A
-40°F (-40°C)	2.4 (5.0)	1.9 (4.0)	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	2.4 (5.0)	5.2 (11)	ft·lb/in ² (kJ/m ²)	



Zytel® 103HSL BKB080

NYLON RESIN

DuPont Performance Polymers

PROSPECTOR®

www.ulprospector.com

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
66 psi (0.45 MPa), Unannealed	392 (200)	--	°F (°C)	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	158 (70.0)	--	°F (°C)	ISO 75-2/A
Melting Temperature ³	504 (262)	--	°F (°C)	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (CTI)	PLC 0	--		UL 746
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94 IEC 60695-11-10, -20
0.028 in (0.71 mm)	V-2	--		
0.06 in (1.5 mm)	V-2	--		
FMVSS Flammability	SE	--		FMVSS 302
Fill Analysis	Dry	Conditioned	Unit	
Ejection Temperature	374 (190)	--	°F (°C)	
Injection	Dry (English)	Dry (SI)		
Drying Temperature	176 °F	80 °C		
Drying Time - Desiccant Dryer	2.0 to 4.0 hr	2.0 to 4.0 hr		
Suggested Max Moisture	0.20 %	0.20 %		
Processing (Melt) Temp	536 to 572 °F	280 to 300 °C		
Melt Temperature, Optimum	554 °F	290 °C		
Mold Temperature	122 to 194 °F	50 to 90 °C		
Mold Temperature, Optimum	158 °F	70 °C		
Holding Pressure	7250 to 14500 psi	50.0 to 100 MPa		
Drying Recommended	yes	yes		
Hold Pressure Time	4.00 s/mm	4.00 s/mm		
Maximum Screw Tangential Speed	945 in/min	24 m/min		
Extrusion	Dry (English)	Dry (SI)		
Drying Temperature	176 °F	80 °C		
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr		
Suggested Max Moisture	0.050 %	0.050 %		
Melt Temperature	536 to 572 °F	280 to 300 °C		
Extrusion Melt Temperature, Optimum	554 °F	290 °C		

Notes¹ Typical properties: these are not to be construed as specifications.² Derived from Similar Grade³ 10°C/min

Where to Buy

Supplier**DuPont Performance Polymers**

Wilmington, DE USA

Telephone: 302-999-4592**Web:** <http://plastics.dupont.com/>

Distributor**Biesterfeld Plastic GmbH***Biesterfeld Plastic GmbH is a Pan European distribution company. Contact Biesterfeld Plastic GmbH for availability of individual products by country.***Telephone:** +49-40-32008-0**Web:** <http://www.biesterfeld-plastic.com/>**Availability:** Algeria, Austria, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Croatia, Cyprus, Czech Republic, Egypt, France, Germany, Greece, Hungary, Italy, Libyan Arab Jamahiriya, Luxembourg, Mauritania, Morocco, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Tunisia, Turkey**CCC Plastics****Telephone:** 800-465-6917**Web:** <http://www.cccplastics.com/>**Availability:** Canada**Distrupol Ltd***Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.***Telephone:** 08452003040**Web:** <http://www.distrupol.com/>**Availability:** Denmark, Finland, Ireland, Norway, Sweden, United Kingdom**PolyOne Distribution***PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.***Telephone:** 800-894-4266**Web:** <http://polyonedistribution.com/>**Availability:** Global

Reseller

A Reseller is not a distributor authorized by the Supplier.

Shanghai Jingyang New Material Technology Co., Ltd**Telephone:** +86-021-80394788; Mr. Zhou: +86-15821998203**Web:** <http://www.basfppsu.com/>**Availability:** Asia Pacific, China