

DuPont Performance Polymers Zytel® E101L BK080 Nylon 66 (Unverified Data**)

Categories: [Polymer](#); [Thermoplastic](#); [Nylon](#); [Nylon 66](#); [Nylon 66, Unreinforced](#)

Material Notes: Zytel® E101L BK080 is a lubricated, black polyamide 66 resin for injection molding.

Vendors:  [DuPont Performance Polymers](#) can be your partner to help you carry a project from concept to commercialization. Our products bridge the gap between often costly high-performance specialty polymers and metals.

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Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in³	DAM; ISO 1183

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield 	55.0 MPa @Temperature 23.0 °C	7980 psi @Temperature 73.4 °F	50%RH; ISO 527
	82.0 MPa @Temperature 23.0 °C	11900 psi @Temperature 73.4 °F	DAM; ISO 527
Elongation at Break	23 %	23 %	DAM; ISO 527
	45 %	45 %	50mm/min (DAM); ISO 527
	>= 50 %	>= 50 %	50%RH; ISO 527
	>= 100 %	>= 100 %	50mm/min (50%RH); ISO 527
Elongation at Yield 	4.3 % @Temperature 23.0 °C	4.3 % @Temperature 73.4 °F	DAM; ISO 527
	25 % @Temperature 23.0 °C	25 % @Temperature 73.4 °F	50%RH; ISO 527
Tensile Modulus	1.40 GPa	203 ksi	50%RH; ISO 527
	3.00 GPa	435 ksi	DAM; ISO 527
Izod Impact, Notched (ISO) 	5.00 kJ/m² @Temperature 23.0 °C	2.38 ft-lb/in² @Temperature 73.4 °F	DAM; ISO 180/1A
	10.0 kJ/m² @Temperature 23.0 °C	4.76 ft-lb/in² @Temperature 73.4 °F	50%RH; ISO 180/1A
Charpy Impact Unnotched 	10.0 J/cm² @Temperature -30.0 °C	47.6 ft-lb/in² @Temperature -22.0 °F	DAM; ISO 179/1eU
	12.0 J/cm² @Temperature -30.0 °C	57.1 ft-lb/in² @Temperature -22.0 °F	50%RH; ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	50%RH; ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	DAM; ISO 179/1eU
Charpy Impact, Notched 	0.250 J/cm² @Temperature -30.0 °C	1.19 ft-lb/in² @Temperature -22.0 °F	50%RH; ISO 179/1eA
	0.300 J/cm² @Temperature -30.0 °C	1.43 ft-lb/in² @Temperature -22.0 °F	DAM; ISO 179/1eA
	0.550 J/cm² @Temperature 23.0 °C	2.62 ft-lb/in² @Temperature 73.4 °F	DAM; ISO 179/1eA
	1.20 J/cm² @Temperature 23.0 °C	5.71 ft-lb/in² @Temperature 73.4 °F	50%RH; ISO 179/1eA

Thermal Properties	Metric	English	Comments
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
UL RTI, Electrical 	130 °C @Thickness 1.50 mm	266 °F @Thickness 0.0591 in	DAM; UL 746B
	130 °C @Thickness 0.710 mm	266 °F @Thickness 0.0280 in	DAM; UL 746B
	130 °C @Thickness 6.00 mm	266 °F @Thickness 0.236 in	DAM; UL 746B
	130 °C @Thickness 3.00 mm	266 °F @Thickness 0.118 in	DAM; UL 746B
UL RTI, Mechanical with Impact 	75.0 °C @Thickness 1.50 mm	167 °F @Thickness 0.0591 in	DAM; UL 746B
	75.0 °C @Thickness 0.710 mm	167 °F @Thickness 0.0280 in	DAM; UL 746B

UL RTI, Mechanical without Impact 	75.0 °C	167 °F	DAM; UL 746B
	@Thickness 6.00 mm	@Thickness 0.236 in	
	75.0 °C	167 °F	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 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 0.710 mm	@Thickness 0.0280 in	
	85.0 °C	185 °F	DAM; UL 746B
	@Thickness 6.00 mm	@Thickness 0.236 in	
	85.0 °C	185 °F	DAM; UL 746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94 	V-2	V-2	DAM; IEC 60695-11-10
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	V-2	V-2	DAM; IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-2	V-2	DAM; UL94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-2	V-2	DAM; UL94
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	V-2	V-2	DAM; IEC 60695-11-10
	@Thickness 6.00 mm	@Thickness 0.236 in	
	V-2	V-2	DAM; IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
	V-2	V-2	DAM; UL94
	@Thickness 3.00 mm	@Thickness 0.118 in	
	V-2	V-2	DAM; UL94
Glow Wire Test 	725 °C	1340 °F	Glow Wire Ignition Temperature; DAM; IEC 60695-2-13
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	750 °C	1380 °F	Glow Wire Ignition Temperature; DAM; IEC 60695-2-13
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	800 °C	1470 °F	Glow Wire Ignition Temperature; DAM; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 °C	1760 °F	Glow Wire Flammability Index; DAM; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	960 °C	1760 °F	Glow Wire Flammability Index; DAM; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	
	960 °C	1760 °F	Glow Wire Flammability Index; DAM; IEC 60695-2-12
	@Thickness 0.710 mm	@Thickness 0.0280 in	

Processing Properties	Metric	English	Comments
Melt Temperature	290 °C	554 °F	Optimum
	280 - 300 °C	536 - 572 °F	
Mold Temperature	70.0 °C	158 °F	Optimum
	50.0 - 90.0 °C	122 - 194 °F	
Drying Temperature	80.0 °C	176 °F	
Dry Time	2 - 4 hour	2 - 4 hour	Dehumidified Dryer
Moisture Content	<= 0.20 %	<= 0.20 %	

Descriptive Properties

Color	Black		
Drying Recommended	Yes, if moisture content of resin exceeds recommended level		
Forms	Pellets		
Generic	Nylon 66		
Part Marking Code	>PA66<		
Product Category	Unreinforced Resins		
Region Available	Europe		
Resin Identification	PA66		

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