



# LubriOne™ LB9800-8002 AR Black

## Polyetheretherketone

### Key Characteristics

Product Description			
Carbon Fiber, PTFE and Graphite Filled High Flow PEEK Compound			
General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Carbon Fiber	• Graphite Powder	• PTFE Micropowder
Features	• Good Wear Resistance • High Heat Resistance	• Low Friction • Lubricated	
Uses	• Appliance Components • Automotive Applications • Bearings	• Business Equipment • Consumer Applications • Conveyor Parts	• Gears • Industrial Applications • Printer Parts
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density <sup>2</sup> (73°F (23°C))	1.43 g/cm <sup>3</sup>	1.43 g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage - Flow 73°F (23°C), 0.126 in (3.20 mm)	1.0E-3 to 3.0E-3 in/in	0.10 to 0.30 %	ASTM D955
Molding Shrinkage - Across Flow 73°F (23°C), 0.126 in (3.20 mm)	0.015 to 0.017 in/in	1.5 to 1.7 %	ASTM D955
Water Absorption (73°F (23°C), 24 hr)	0.040 %	0.040 %	ASTM D570
Water Absorption (Saturation, 73°F (23°C))	0.10 %	0.10 %	ASTM D570
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus 73°F (23°C), 0.126 in (3.20 mm)	1.74E+6 psi	12000 MPa	ISO 527-2/1/5
Tensile Stress Break, 73°F (23°C), 0.126 in (3.20 mm) Break, 248°F (120°C), 0.126 in (3.20 mm)	22500 psi 16700 psi	155 MPa 115 MPa	ISO 527-2/1/5
Tensile Strain Break, 73°F (23°C), 0.126 in (3.20 mm)	2.0 %	2.0 %	ISO 527-2/1/5
Flexural Modulus <sup>3</sup> 73°F (23°C), 0.126 in (3.20 mm) 248°F (120°C), 0.126 in (3.20 mm)	1.74E+6 psi 1.67E+6 psi	12000 MPa 11500 MPa	ASTM D790
Flexural Strength <sup>3</sup> Break, 73°F (23°C), 0.126 in (3.20 mm) Break, 248°F (120°C), 0.126 in (3.20 mm)	32600 psi 26800 psi	225 MPa 185 MPa	ASTM D790
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	2.9 ft·lb/in <sup>2</sup>	6.0 kJ/m <sup>2</sup>	ISO 179

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Impact	Typical Value (English)	Typical Value (SI)	Test Method
Charpy Unnotched Impact Strength 73°F (23°C)	17 ft·lb/in <sup>2</sup>	35 kJ/m <sup>2</sup>	ISO 179
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness (Shore D)	84	84	ISO 868
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	599 °F	315 °C	ASTM D648
Glass Transition Temperature	293 °F	145 °C	DSC
Melting Temperature	649 °F	343 °C	DSC
CLTE - Flow < 289°F (< 143°C) > 289°F (> 143°C)	6.7E-6 in/in/°F 7.2E-6 in/in/°F	1.2E-5 cm/cm/°C 1.3E-5 cm/cm/°C	ISO 11359-2
CLTE - Transverse < 289°F (< 143°C) > 289°F (> 143°C)	4.2E-5 in/in/°F 1.2E-4 in/in/°F	7.5E-5 cm/cm/°C 2.2E-4 cm/cm/°C	ISO 11359-2
Thermal Conductivity 140°F (60°C) <sup>4</sup> 140°F (60°C) <sup>5</sup>	3.2 Btu·in/hr/ft <sup>2</sup> /°F 9.4 Btu·in/hr/ft <sup>2</sup> /°F	0.46 W/m/K 1.4 W/m/K	ASTM C177
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Surface Resistivity	1.0E+10 to 1.0E+13 ohms	1.0E+10 to 1.0E+13 ohms	ASTM D257
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating (0.0315 in (0.800 mm))	V-0	V-0	Internal Method

### Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	302 to 320 °F	150 to 160 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Processing (Melt) Temp	662 to 734 °F	350 to 390 °C
Mold Temperature	356 to 392 °F	180 to 200 °C

#### Injection Notes

Injection Pressure: MED-HIGH  
Hold Pressure: MED-HIGH  
Screw Speed: MODERATE  
Back Pressure: LOW

#### Notes

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> ±0.03

<sup>3</sup> 0.051 in/min (1.3 mm/min)

<sup>4</sup> through-plane

<sup>5</sup> in-plane

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