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	• High Heat Resistance • Low Friction	• Lubricated • Wear Resistant	
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 [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density [2] (73°F (23°C))	1.43 g/cm³	1.43 g/cm³	ISO 1183
Molding Shrinkage - Flow			ASTM D955
73°F (23°C), 0.126 in (3.20 mm)	1.0E-3 to 3.0E-3 in/in	0.10 to 0.30 %	
Molding Shrinkage - Across Flow			ASTM D955
73°F (23°C), 0.126 in (3.20 mm)	0.015 to 0.017 in/in	1.5 to 1.7 %	
Water Absorption (24 hr, 73°F (23°C))	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			ISO 527-1/1/5
73°F (23°C), 0.126 in (3.20 mm)	1.74E+6 psi	12000 MPa	
Tensile Stress			ISO 527-2/1/5
Break, 73°F (23°C), 0.126 in (3.20 mm)	22500 psi	155 MPa	
Break, 248°F (120°C), 0.126 in (3.20 mm)	16700 psi	115 MPa	
Tensile Strain			ISO 527-2/1/5
Break, 73°F (23°C), 0.126 in (3.20 mm)	2.0 %	2.0 %	
Flexural Modulus [3]			ASTM D790
73°F (23°C), 0.126 in (3.20 mm)	1.74E+6 psi	12000 MPa	
248°F (120°C), 0.126 in (3.20 mm)	1.67E+6 psi	11500 MPa	
Flexural Strength [3]			ASTM D790
Break, 73°F (23°C), 0.126 in (3.20 mm)	32600 psi	225 MPa	
Break, 248°F (120°C), 0.126 in (3.20 mm)	26800 psi	185 MPa	

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Impact	Typical Value (English)	Typical Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	2.9 ft·lb/in²	6.0 kJ/m²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
73°F (23°C)	17 ft·lb/in²	35 kJ/m²	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore D, 10 sec)	84	84	ISO 48-4
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	599 °F	315 °C	
Glass Transition Temperature	293 °F	145 °C	DSC
Melting Temperature	649 °F	343 °C	DSC
CLTE - Flow			ISO 11359-2
< 289°F (< 143°C)	6.7E-6 in/in/°F	1.2E-5 cm/cm/°C	
> 289°F (> 143°C)	7.2E-6 in/in/°F	1.3E-5 cm/cm/°C	
CLTE - Transverse			ISO 11359-2
< 289°F (< 143°C)	4.2E-5 in/in/°F	7.5E-5 cm/cm/°C	
> 289°F (> 143°C)	1.2E-4 in/in/°F	2.2E-4 cm/cm/°C	
Thermal Conductivity			ASTM C177
140°F (60°C) [4]	3.2 Btu·in/hr/ft²/°F	0.46 W/m/K	
140°F (60°C) [5]	9.4 Btu·in/hr/ft²/°F	1.4 W/m/K	
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 (0.031 in (0.8 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

[1] Typical values are not to be construed as specifications.

[2] ±0.03

[3] 0.051 in/min (1.3 mm/min)

[4] through-plane

[5] in-plane

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