Edgetek™ 5209 Black 30 A 1

Acetal (POM) Copolymer

Key Characteristics

Product Description
The Edgetek® Engineering Thermoplastic Compounds portfolio covers a broad range of standard and custom-formulated high performance materials. This portfolio includes high-temperature materials for elevated service temperature environments, high-modulus / structural materials for load-bearing and high-strength applications and flame-retardant products. These compounds are based on select engineering thermoplastic resins that are compounded with reinforcing additives such as carbon fiber, glass fiber and glass beads.

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Copolymer • General Purpose	• Low Friction • Wear Resistant	
Uses	• Automotive Applications • Bearings • Business Equipment	• Consumer Applications • Gears • General Purpose	• Industrial Applications • Pulleys • Rollers
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.41	1.41	ASTM D792
Melt Mass-Flow Rate (MFR) [2] (190°C/2.16 kg)	8.2 g/10 min	8.2 g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.025 to 0.027 in/in	2.5 to 2.7 %	ASTM D955
Water Absorption (24 hr, 0.125 in (3.18 mm))	0.20 %	0.20 %	ASTM D570
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Modulus [3]	365000 psi	2520 MPa	ASTM D638
Tensile Strength [3] (Yield)	9500 psi	65.5 MPa	ASTM D638
Tensile Elongation [3] (Break)	40 %	40 %	ASTM D638
Flexural Modulus	365000 psi	2520 MPa	ASTM D790
Flexural Strength	13000 psi	89.6 MPa	ASTM D790
Impact	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Notched Izod Impact			ASTM D256A
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	1.3 ft·lb/in	69 J/m	
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	230 °F	110 °C	
CLTE - Flow	4.8E-5 in/in/°F	8.6E-5 cm/cm/°C	ASTM D696

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	180 °F	82 °C
Drying Time	2.0 hr	2.0 hr
Processing (Melt) Temp	370 to 410 °F	188 to 210 °C
Mold Temperature	120 to 180 °F	49 to 82 °C

Notes

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

[2] Procedure A

[3] Type I, 0.20 in/min (5.1 mm/min)

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