



Edgetek™ 5209 Natural 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 • North America	• South America
Features	• Copolymer • General Purpose	• Good Wear Resistance • Low Friction	
Uses	• Automotive Applications • Bearings • Business Equipment	• Consumer Applications • Gears • General Purpose	• Industrial Applications • Pulleys • Rollers
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.41	1.41 g/cm ³	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 73°F (23°C), 0.125 in (3.18 mm), Injection Molded	1.3 ft-lb/in	69 J/m	ASTM D256A
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	230 °F	110 °C	ASTM D648
CLTE - Flow	0.000048 in/in/°F	0.000086 cm/cm/°C	ASTM D696

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	180 °F	82.2 °C
Drying Time	2.0 hr	2.0 hr

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Injection	Typical Value (English)	Typical Value (SI)
Processing (Melt) Temp	370 to 410 °F	188 to 210 °C
Mold Temperature	120 to 180 °F	48.9 to 82.2 °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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