DuraKor™

PRODUCT DESCRIPTION

DuraKor™ is a polyketone-based engineering material providing an ideal balance among essential mechanical characteristics and yielding a polymer renowned for its strength, toughness, and chemical resistance.

DuraKor™ performs well in applications where low friction and wear resistance are paramount. With very good elongation and excellent impact strength, mechanical performance remains stable through a variety of environmental conditions. Using reclaimed carbon monoxide during the material manufacturing process, DuraKor™ provides a lower carbon footprint than other associated polymers in this category.

ADVANTAGES

- Low temperature impact strength
- Excellent chemical resistance and barrier properties
- Improved wear and friction over polyamides
- Low carbon footprint
- Best ductility available
- Strength at high temperatures
- Low toxicity

MECHANICAL PROPERTIES

	Test Condition / Orientation	Typical Value	Test Method
Tensile Modulus (MPa)	XY coupons	1305	ASTM D638*
	Z coupons	1349	
Ultimate Tensile Strength (MPa)	XY coupons	53	
	Z coupons	51	
Ultimate Tensile Strength (psi)	−65 °F	1183	
	180 °F	4327	
Elongation at Break (%)	XY coupons	41	
	Z coupons	21	
Flexural Modulus (MPa)	XY coupons	1028	ASTM D790*
	Z coupons	1068	
Flexural Strength (MPa)	XY coupons	41	
	Z coupons	42	
Izod Impact Energy, Notched (J/m)	XY coupons	83	ASTM D256*
	Z coupons	70	
Izod Impact Energy, Un-notched (J/m)	XY coupons	1241	
	Z coupons	776	
Izod Impact Strength, Notched (kJ/m2)	XY coupons	8	ASTM D256*
	Z coupons	7	
Izod Impact Strength, Un-notched (kJ/m2)	XY coupons	95	
	Z coupons	59	

OTHER PHYSICAL PROPERTIES

Property (with Unit)	Test Condition	Typical Value	Test Method
Part Color / Appearance	Ambient	Dark Grey	Visual
Part Color / Appearance	Vapor Smoothed	Black	
Part Density (g/cm³)	Ambient	1.23	ASTM D792
Bulk Density (g/cm³)	Ambient	0.51	ASTM D1895
Melt Temperature (°C)	Ambient	197	DSC
Particle Size Distribution D10 (µm)	D10	35	Laser Diffraction
Particle Size Distribution D50 (µm)	D50	50	
Particle Size Distribution D90 (µm)	D90	76	
Heat Deflection Temperature (°C)	.455 MPa	157	ASTM D648*
Heat Deflection Temperature (°C)	1.8 MPa	126	

*Tested dry, as printed

DISCLAIMER

The information in this technical data sheet, including material properties, are obtained from testing representative samples under carefully controlled conditions and are provided for reference only. Material properties may be impacted by storage, handling, processing equipment/parameters, and product design, among other factors. The information is not a substitute for user testing to determine fitness for any specific use and the user is responsible for ensuring safe and lawful use of the product.

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