



POLYMER INDUSTRIES

Acetal Typical Properties

Property	Test Method	Units	NATURAL AND BLACK Unfilled Copolymer	Acetal esd Static Dissipative Copolymer
Mechanical				
Specific Gravity	ASTM-D792	---	1.4	1.33
Tensile Strength	ASTM-D638	psi	9,000-10,200	6,600
Elongation at Break	ASTM-D638	%	30-60	45
Tensile Modulus	ASTM-D638	psi	400,000	---
Flexural Strength	ASTM-D790	psi	12,000	7,000
Flexural Modulus	ASTM-D790	psi	366,000	210,000
Compression Strength	ASTM-D695	psi	15,000	---
Izod Notched Impact	ASTM-D256	ft.- lb./in	1	2
Rockwell Hardness	ASTM-D785	M or R scale	M90	---
Thermal				
Coef. Of Linear Thermal Expansion	ASTM-D696	in./in./°F	5.4x10 ⁻⁵	6.5x10 ⁻⁵
Max Continuous Temp.	Internal Std.	°F	185	185
Heat Defl. Temp. @ 264 psi	ASTM-D648	°F	220	141
Melting Point	ASTM-D3418	°F	335	---
Electrical				
Dielectric Strength-Short Term	ASTM-149	volts/mil	500	---
Dielectric Constant @ 60 Hz	ASTM-D150	---	3.8	---
Dielectric Constant @ - Hz	ASTM-D150	---	3.8	---
Dissipation Factor @ 60 Hz	ASTM-D150	---	0.003	---
Volume Resistivity	ASTM-D257	ohm-cm	10 ¹⁵	10 ⁹ x10 ¹¹
Miscellaneous				
Water Absorption/24 hours	ASTM-D570	%	0.25	0.2
Water Absorption @ Saturation	ASTM-D570	%	0.8	2.5
Flammability	UL-94		HB	HB
Dynamic Coefficient of Friction	Internal Std.		0.21	---
Agency Compliance				
FDA	---	---	Yes	No
USDA	---	---	Yes	No
NSF	---	---	No	No

Note: Meets requirements for NAVSEA 5959311 rev.C and NAVSEA 803-4384678 rev.B and C

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