CRAFTECH®
INDUSTRIES, INC.

Acetal Copolymer

KEY FEATURES

- No Centerline Porosity
- Good Wear and Abrasion Properties
- Low Moisture Absorption
- Good Dimensional Stability
- Excellent Machinability
- Good Property Retention at Elevated Temperatures
- Good Combination of Mechanical Properties
- Chemical Resistance to Fuels and Solvents
- Black Grades are Manufactured from Resin that is FDA Compliant
- Resistant to Aqueous Solutions with pH Values Ranging from 4 to 14

DESCRIPTION

Acetal Copolymer is a semi-crystalline thermoplastic offering high strength, stiffness and toughness. It is resistant to hot water, hydrocarbons and solvents, and it possesses good bearing and wear properties. It is available in natural and black grades. Acetal Copolymer is commonly used as bushings, rollers, wear strips and other applications requiring a combination of strength, low moisture absorption, chemical resistance and dimensional stability.

TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
Physical	Density		g/cm^3	1.41	D792
	Chemical Designation			POM-C	
	Filler				

	Properties	Condition	Units	Value	ASTM Test
Mechanical	Tensile Modulus	@ 73 °F	PSI	330,000	D638
	Tensile Strength	@ 73 °F	PSI	9,300	D638
	Shear Strength	@ 73 °F	PSI	8,000	D732
	Elongation @ Yld	@ 73 °F	%	9	D638
	Elongation @ Brk	@ 73 °F	%	40	D638
	Flexural Modulus	@ 73 °F	PSI	400,000	D790
	Flexural Strength	@ 73 °F	PSI	13,000	D790
	Compressive Modulus	@ 73 °F	PSI	250,000	D790
	Compressive Strength	@ 73 °F, 10% strain	PSI	12,000	D695
	Izod (Charpy) Impact Strength	@ 73 °F	ft-lbs/in	1	D256
	Rockwell Hardness	@ 73 °F	M (R) Scale	86	D785
	Coefficient of Friction	Static			
	Coefficient of Friction	Dynamic, 40PSI, 50 FPM		0.21	D3702
	Wear (K) Factor		in^3-min/ft-lbs-hr	$65*10^{-10}$	D3702
	Limiting PV		psi-fpm	2,700	

	Properties	Condition	Units	Value	ASTM Test
Thermal	Heat Deflection Temperature	@ 66 PSI	°F	316	D648
	Service Temperature	Long Term	°F	195	D648
	Heat Deflection Temperature	@ 264 PSI	°F	230	
	Service Temperature	Intermittent	°F	285	
	Thermal Expansion (CLTE)		in/in/°F	$4.7*10^{-5}$	D696
	Specific Heat		BTU/lb-°F		
	Thermal Conductivity		BTU-in/hr-ft^2-°F	1.6	F433

	Properties	Condition	Units	Value	ASTM Test
Electrical	Surface Resistivity		ohms/square	$>10^{13}$	ANSI/ESD STM 11.11
	Volume Resistivity		ohm-cm	$1.0*10^{14}$	D257
	Dielectric Constant	50% RH		3.7	D150
	Dielectric Strength	@ 60 Hz, 73 °F	V/mil	500	D149
	Dissipation Factor	@ 60 Hz, 73 °F		0.001	D150

	Properties	Condition	Units	Value	ASTM Test
Other	Moisture Absorption	@ 24 hrs, 73 °F	%	0.18	D570
	Moisture Absorption	@ Saturation, 73 °F	%	0.8	D570
	Flammability	UL 94		HB	
	Food Grade			Y	
	Relative Cost			$	

- The data stated above are typical values intended for reference and comparison purposes only.
- The data should not be used as a basis for design specifications or quality control.
- The information is provided as a guide to the best of our knowledge and given without obligation or liability.
- Testing under individual application circumstances is recommended