

# ACETAL COPOLYMER

## KEY FEATURES

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

## 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	Chemical Designation			POM	
	Filler				
	Density		g/cm <sup>3</sup>	1.41	D792
Mechanical	Tensile Modulus	@ 73 °F	PSI	330,000	D638
	Tensile Strength @ Yld	@ 73 °F	PSI	9,300	D638
	Tensile Strength @ Brk	@ 73 °F	PSI	9,700	D638
	Shear Strength	@ 73 °F	PSI		
	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	D695
	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 <sup>3</sup> -min/ft-lbs-hr	65*10 <sup>-10</sup>	D3702
Limiting PV		psi-fpm			

### TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
<b>Thermal</b>	Vicat Softening Point		°F		
	Melting Temperature		°F	329	
	Heat Deflection Temperature	@ 66	°F	316	D648
	Heat Deflection Temperature	@ 264	°F	230	D648
	Service Temperature	Intermittent	°F	285	
	Service Temperature	Long Term	°F	195	
	Thermal Expansion (CLTE)		in/in/°F	4.7*10 <sup>-5</sup>	D696
	Specific Heat		BTU/lb-°F		
	Thermal Conductivity		BTU-in/hr-ft_-°F		
<b>Electrical</b>	Surface Resistivity		ohms/square		
	Volume Resistivity		ohm-cm	1.0*10 <sup>14</sup>	D257
	Dielectric Strength		V/mil	500	D149
	Dielectric Constant	@ 60 Hz, 73 °F 50% RH		3.7	D150
	Dissipation Factor	@ 60 Hz, 73 °F		0.001	D150
<b>Other</b>	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.