

# POM (Acetal Copolymer)

Acetal copolymer is a semi-crystalline thermoplastic. It is often used in precision parts as it has great strength, stiffness, dimensional stability, and bearing and wear properties. Moreover, it is resistant to hot water, hydrocarbons, and solvents.

## Applications

Common applications of acetal copolymer include bushings, rollers, wear strips, gears, pump parts and fittings due to its good strength, wear resistance and ability to function in a wet environment with little absorption. Target industries include the automotive and construction industries, agricultural machinery, food engineering, material handling, and fluid handling.

## Key Product Benefits

- Great Strength and Stiffness
- Chemical Resistance
- High Dimensional Stability
- Low Friction
- Low Moisture Absorption
- Machinability

## Properties

Property	Test Method	Value
Density	ASTM D792	1.41 g/cm <sup>3</sup>
Water Absorption @ 24 hours	ASTM D570	0.20-0.22%
Water Absorption @ Saturation	ASTM D570	0.8-0.9%
Dissipation Factor @ 1MHz	ASTM D150	0.001-0.005
Shore Hardness (D Scale)	ASTM D2240	85
Tensile Strength @ Yield	ASTM D638	8,800-9,500 psi
Tensile Modulus	ASTM D638	380,000-400,000 psi
Elongation @ Break	ASTM D638	25-40%
Flexural Strength	ASTM D790	11,000-12,000 psi
Flexural Modulus	ASTM D790	360,000-400,000 psi
Rockwell Hardness (M Scale)	ASTM D785	86-88
Shear Strength	ASTM D732	8,000 psi

<b>Property (Continued)</b>	<b>Test Method (Continued)</b>	<b>Value (Continued)</b>
Izod Impact, Notched	ASTM D256	1.0-1.2 ft-lb/in
Dynamic Coefficient of Friction	ASTM D3702	0.21-0.25
Thermal Conductivity		1.6 BTU-in/hr/ft <sup>2</sup> /°F
Coefficient of Linear Thermal Expansion	ASTM D696	4.7-5.5 in/in/°F x 10 <sup>-5</sup>
Melting Point		329-335°F
Continuous Service Temperature, Air		180-210°F
Heat Deflection Temperature @ 264 psi	ASTM D648	220-230°F
Heat Deflection Temperature @ 66 psi	ASTM D648	316-320°F
Flammability	UL 94	HB
Dielectric Constant @ 1 MHz	ASTM D150	3.7-3.8
Dielectric Strength	ASTM D149	420-500 V/mil
Volume Resistivity	ASTM D257	1014 ohm-cm