



# POLYMER INDUSTRIES

GEARED TOWARDS EXCELLENCE

**MECHETEC®**  
**ACETAL**



MECHETEC ACETAL - Polyoxymethylene Copolymer (POM-C)

## APPLICATIONS

Gears  
Wear Strips  
Timing Screws  
Pistons and Valves  
Pump Components  
Bushings and Bearings

## KEY FEATURES

185° F Continuous Use Temperature  
Excellent Machining Stability  
High Strength and Stiffness  
Superior Wear Resistance  
Large Size Capability



Easily Machined and Fabricated



Low Water Absorption

## SHAPES AND SIZES

### ROD DIAMETER

NATURAL	0.25" - 10.0"
BLACK	0.25" - 10.0"
esd	0.25" - 3.0"

### SHEET THICKNESS

NATURAL	0.25" - 4.0"
BLACK	0.25" - 4.0"
esd	0.25" - 2.0"



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	Test Method	Units	NATURAL BLACK Unfilled Copolymer	esd Static Dissipative Copolymer
<b>Mechanical</b>				
Specific Gravity	ASTM-D792	---	1.4	1.33
Tensile Strength	ASTM-D638	psi	9,000-10,200	6,600
Tensile Elongation	ASTM-D638	%	30-60	45
Tensile Modulus of Elasticity	ASTM-D638	psi	400,000	---
Flexural Strength	ASTM-D790	psi	12,000	7,000
Flexural Modulus of Elasticity	ASTM-D790	psi	366,000	210,000
Compressive 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	---
<b>Thermal</b>				
Coef. of Linear Thermal Expansion	ASTM-D696	in./in./deg F	5.4 X 10 <sup>-5</sup>	6.5 X 10 <sup>-5</sup>
Max. Continuous Use Temp.	Internal Std.	OF	185	185
Heat Deflection Temp.@ 264 psi	ASTM-D648	OF	220	141
Melting Point	ASTM-D3418	OF	335	---
<b>Electrical</b>				
Dielectric Strength-Short Term	ASTM-D149	volts/mil	500	---
Dielectric Constant@ 60 Hz	ASTM-D150	---	3.8	---
Dielectric Constant@ 10 <sup>6</sup> Hz	ASTM-D150	---	3.8	---
Dissipation Factor@ 60 Hz	ASTM-D150	---	0.003	---
Volume Resistivity	ASTM-D257	ohm-cm	10 <sup>15</sup>	10 <sup>9</sup> -10 <sup>11</sup>
<b>Miscellaneous</b>				
Water Absorption/24 hrs.	ASTM-D570	%weight	0.25	0.2
Water Absorption @ Saturation	ASTM-D570	%weight	0.8	2.5
Flammability	UL-94	---	HB	HB
Dynamic Coefficient of Friction	Internal Std.	---	0.21	---
<b>Agency Compliance</b>				
FDA	---	---	Natural Only	No
USDA	---	---	Yes	No
NSF	---	---	---	No

MECHETEC® is a registered trademark of Polymer Industries

Distributed by:

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