

### Applications

- Bearings
- Bushings
- Electrical components
- Gears
- Rollers
- Structural keels

### Advantages

- Excellent wear resistance
- Very good strength, stiffness
- Good heat resistance
- Excellent chemical resistance
- Opaque

### Performance Characteristics

FDA Compliant

### Grades

- Acetal Copolymer, unfilled
- Acetal Homopolymer, unfilled - Delrin®
- Acetal Homopolymer, PTFE filled - Delrin®
- Glass Reinforced
- Static Control
- Electrostatic

*NOTE: Several grades of this material are available. For additional information regarding this plastic, contact your Emco Industrial Plastics representative or call (800) 292-9906.*

### Acetal Copolymer, Unfilled [ Polyoxymethylene, Unfilled ]

Acetal is the common name for a family of thermoplastics with the chemical name "PolyOxy-Methylene". Acetal is available in a general purpose copolymer grade, a homopolymer version (Delrin®), and several filled Delrin® grades. Acetal provides high strength and stiffness, enhanced dimensional stability, and is easy to machine. As a semi-crystalline material, acetal is characterized by a low coefficient of friction and good wear properties. Acetal homopolymers are available in several viscosity ranges that meet a variety of processing and end-use needs. The higher viscosity materials are generally used for extrusions and for molded parts requiring maximum toughness; the lower viscosity grades are used for injection molding. Elastomer-modified grades offer greatly improved toughness.

A practical difference between the copolymer and the homopolymer is that the copolymer can accept reinforcement much better than the homopolymer. Thus, the strength of the copolymer can be increased far more easily than that of the homopolymer. Both types can be modified by additives such as PTFE (Teflon®) to increase the resistance to wear.

### Brand Names

Pomalux®, Celcon®, Sustarin®-C, Unital® C, Acetron® GP

*Emco Industrial Plastics doesn't claim to represent all of the manufacturers or trade name products listed. This list is intended as a guide of typical materials available for purchase from Emco Industrial Plastics, Inc. For additional information, contact an Emco Industrial Plastics representative at (800) 292-9906.*

### Availability

TYPE	SIZE	LENGTH	COLOR
<b>Sheet</b>	.060 - 6" TH	24" x 48", 12" x 48", 48" x 96"	Natural, Black
<b>Rod</b>	1/8" - 12" DIA	96", 120"	Natural, Black
<b>Tube</b>	1/2" - 4" ID	120"	Natural
<b>Film</b>	.010 - .060 TH		Natural, Black

**Give us your cut-to-size dimensions. We will precision-cut these plastics to your exact size. Additional sizes and colors available upon request.**

### Properties

The following physical property information is based on typical values of the base....

PHYSICAL PROPERTIES	UNITS	ASTM	RESULTS
Density	lb/in <sup>3</sup>	D792	0.054
Water Absorption, 24 hrs	%	D570	0.2
MECHANICAL PROPERTIES	UNITS	ASTM	RESULTS
Tensile Strength @yield	psi	D638	9.5
Tensile Modulus	psi	D638	400
Tensile Elongation @Break	%	D638	30
Flexural Strength	psi	D790	12
Flexural Modulus	psi	400000	400
Compressive Strength	psi	D695	15
Compressive Modulus	psi	D695	400
Hardness, Rockwell R		D785	M88/R120
IZOD Impact Strength Notched	ft-lb/in	D256	1
THERMAL PROPERTIES	UNITS	ASTM	RESULTS
Coefficient of Linear Thermal Expansion	(x 10 <sup>-5</sup> in./in./°F)	D256	5.4
Heat Deflection Temp at 264 psi	°F		220
Melting Temperature	°F	D3418	335
Max Operating Temp	°F		180
Thermal Conductivity	BTU-in/ft <sup>2</sup> -hr-°F	C177	1.6
Flammability Rating		UL94	HB
ELECTRICAL PROPERTIES	UNITS	ASTM	RESULTS
Dielectric Strength	V/mil	D149	420
Dielectric Constant		D150	3.8 @1 MHz
Dissipation Factor		D150	3.8 @1 MHz
Volume Resistivity, 50% RH	ohm-cm	D257	1015

*NOTE: The property values presented above are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.*