



ACETAL ~ DELRIN ~ DELRIN AF

Characteristics

- * No Centerline Porosity (Acetron GP)
- * Natural Grade is FDA, NSF, and USDA Compliant
- * High Strength and Stiffness - Good Wear and Abrasion Properties
- * Easy to Machine
- * Low Moisture Absorption
- * Available in Multiple Colors

Description

Acetal is a copolymer material providing high strength and stiffness coupled with dimensional stability and ease of machining. As a semi-crystalline material, Acetal is also characterized by a low coefficient of friction and good wear properties - especially in wet environments.

Because Acetal absorbs minimal amounts of moisture, its physical properties remain constant in a variety of environments. Low moisture absorption results in excellent dimensional stability for close-tolerance machined parts. In high moisture or submerged applications, Acetal bearings outperform Nylon 4 to 1. Acetal is ideally suited for close tolerance mechanical parts and electrical insulators which require strength and stiffness. It also offers resistance to a wide range of chemicals including many solvents.

E. Jordan Brookes offers both homopolymer and copolymer grades of Acetal including enhanced bearing grade materials. Acetron GP Acetal is porosity-free and is provided as our standard grade. For slightly higher mechanical properties, we offer our homopolymer acetal (Delrin) product. For improved frictional properties we offer PTFE filled (Delrin AF) and other internally lubricated grades.

Forms Available

- ROD .062 to 12.00 " diameter, Lengths to 12 feet
 BUSHING 1.97" - 13.5" OD, .393" - 11.8" ID
 PLATE .031" to 4.500" thick, Widths to 48", Lengths to 10 feet
 COIL .010 to .125, Widths .250 to 24"
 COLOR(s) White and Black are standard, Multiple other colors available on request

Typical Property Values

MECHANICAL @ 73°F

Specific Gravity	
Tensile Strength	psi
Tensile Modulus of Elasticity	psi
Tensile Elongation (at Break)	%
Flexural Strength	psi
Flexural Modulus of Elasticity	psi
Shear Strength	psi
Compressive Strength, 10% Deformation	psi
Compressive Modulus of Elasticity	psi
Rockwell Hardness	M Scale
Izod Impact Strength, Notched	ft-lbs/in. of notch
Coefficient of Friction, Dynamic (Dry vs. Steel)	
Limiting PV (4 :1 Safety Factor Applied)	ft.lbs/in. ² min
Wear Factor	in ³ -min/ft.lbs. hr.
Water Absorption 24 hrs	% by wt.

THERMAL

Coefficient of Linear Expansion (-40°F to 300°F)	in./in./°F
Heat Deflection Temperature @264 psi	°F
Melting Point (Crystalline)	°F
Continuous Service Temperature in Air	°F
Thermal Conductivity	°F

ELECTRICAL

Dielectric Strength, Short Term	Volts/mil
Surface Resistivity	Ohms/Sq.
Dielectric Constant	1 MHz
Dissipation Factor	1 MHz

Acetron® GP

Acetal	Delrin®	Delrin® AF
1.41	1.41	1.50
9,500	11,000	8,000
400,000	450,000	435,000
30	30	15
12,000	13,000	12,000
400,000	450,000	445,000
8,000	9,000	7,600
15,000	16,000	16,000
400,000	450,000	350,000
88	89	85
1.00	1.00	0.70
0.25	0.25	0.19
2,700	2,700	8,300
200	200	60
0.20	0.20	0.20
5.4 x 10 ⁻⁵	4.7 x 10 ⁻⁵	5 x 10 ⁻⁵
220	250	244
335	347	347
180	180	180
1.60	2.50	
420	450	400
>10 ¹³	>10 ¹³	>10 ¹³
3.80	3.70	3.10
0.005	0.005	0.010

(Properties listed above are provided for reference only, they should not be used for design specifications or quality control , Delrin is a registered Trademark of Dupont Corp.)