



MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

Material Data Sheet

Material: Delrin® Acetal (POM) Polyoxymethylene

Delrin®, a homopolymer acetal, is also manufactured and stocked in rod and plate. It offers slightly higher mechanical properties than Acetron® GP Acetal, but may contain a low-density center, especially in larger cross-sections. Copolymer acetal also offers better chemical resistance than homopolymer acetal. Delrin is ideal for small diameter, thin-walled bushings that benefit from the additional strength and rigidity of homopolymer acetal.

Mechanical Properties	Test Method ASTM	Value	Units
Specific Gravity, 73°F	D792	1.41	
Tensile Strength, 73°F	D638	11,000	psi
Tensile Modulus of Elasticity, °F	D638	450,000	psi
Tensile Elongation (at break), 73°F	D638	30	%
Flexural Strength, 73°F	D790	13,000	psi
Flexural Modulus of Elasticity, 73°F	D790	450,000	psi
Shear Strength, 73°F	D732	9,000	psi
Compressive Strength, 10% Deformation, 73°F	D695	16,000	psi
Compressive Modulus of Elasticity, 73°F	D695	450,000	psi
Hardness, Rockwell, Scale as noted, 73°F	D785	M89(R122)	
Hardness, Durometer, Shore "D" Scale, 73°F	D2240	D86	
Izod Impact (notched), 73°F	D256 Type A	1	ft-lb/in of notch
Coefficient of Friction (Dry vs. Steel) Dynamic	QTM 55007	0.25	
Limiting PV (with 4:1 safety factor applied)	QTM 55007	2,700	ft.lbs./in. ² min
Wear Factor "k" x 10 ⁻¹⁰	QTM 55010	200	in. ³ -min/ft.lbs.hr
Thermal Properties			
Coefficient of Linear Thermal Expansion (-40°F to 300°F)	E-831 (TMA)	4.7 x 10 ⁻⁵	in/in./°F
Heat Deflection Temperature 264 psi	D648	250	°F
TG-Glass transition (amorphous)	D3418	N/A	°F
Melting Point (Crystalline) peak	D3418	347	°F
Continuous Service Temperature in Air (Max.) (1)		180	°F
Thermal Conductivity	F433	2.5	BTU-in/hr-ft ² -°F
Electrical Properties			
Dielectric Strength, Short Term	D149	450	Volts/mil
Surface Resistivity	EOS/ESD S11.11	>10 ¹³	ohm/square
Dielectric Constant, 106 Hz	D150	3.7	
Dissipation Factor, 106 Hz	D150	0.005	
Flammability @ 3.1 mm (1/8 in.)	UL 94	HB	
FDA Compliant		Yes	

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*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufactures, converters and other published sources. However, they should not be used for specification or design purposes. Above information is provided by Quadrant EPP.