

Delrin[®] Acetal Homopolymer

KEY FEATURES

- Good Dimensional Stability
- Superior Impact and Creep Resistance
- Low Moisture Absorption
- Chemical Resistance to Fuels and Solvents
- Excellent Machinability
- Natural Grade is made from Resin that is FDA, NSF and USDA Compliant
- High Fatigue Endurance
- High Strength and Stiffness Properties
- Good Wear and Abrasion Properties

DESCRIPTION

DELTRIN[®] acetal homopolymer is a crystalline plastic which offers an excellent balance of properties that bridge the gap between metals and plastics. DELTRIN[®] possesses high tensile strength, creep resistance and toughness. It also exhibits low moisture absorption. It is chemically resistant to hydrocarbons, solvents and neutral chemicals. These properties along with its fatigue endurance make DELTRIN[®] ideal for many industrial applications.

TYPICAL PROPERTY VALUES

Physical	Properties	Condition	Units	Value	ASTM Test
	Density		g/cm ³	1.41	D792
	Chemical Designation			POM-H	
	Filler				

Mechanical	Properties	Condition	Units	Value	ASTM Test
	Tensile Modulus	@ 73 °F	PSI	450,000	D638
	Tensile Strength	@ 73 °F	PSI	11,000	D638
	Shear Strength	@ 73 °F	PSI	9,000	D732
	Elongation @ Yld	@ 73 °F	%		
	Elongation @ Brk	@ 73 °F	%	25	D638
	Flexural Modulus	@ 73 °F	PSI	420,000	D790
	Flexural Strength	@ 73 °F	PSI	11,500	D790
	Compressive Modulus	@ 73 °F	PSI		
	Compressive Strength	@ 73 °F, 10% strain	PSI	16,000	D695
	Izod (Charpy) Impact Strength	@ 73 °F	ft-lbs/in	1.5	D256
	Rockwell Hardness	@ 73 °F	M (R) Scale	94	D785
	Coefficient of Friction	Static			
	Coefficient of Friction	Dynamic, 40PSI, 50 FPM		0.2	D3702
	Wear (K) Factor		in ³ -min/ft-lbs-hr	55*10 ⁻¹⁰	D3702
Limiting PV		psi-fpm	2,700		

Thermal	Properties	Condition	Units	Value	ASTM Test
	Heat Deflection Temperature	@ 66 PSI	°F	336	D648
	Service Temperature	Long Term	°F	185	
	Heat Deflection Temperature	@ 264 PSI	°F	257	D648
	Service Temperature	Intermittent	°F	300	
	Thermal Expansion (CLTE)		in/in/°F	6.8*10 ⁻⁵	D696
	Specific Heat		BTU/lb-°F	0.35	
Thermal Conductivity		BTU-in/hr-ft ² -°F	2.5	F433	

Electrical	Properties	Condition	Units	Value	ASTM Test
	Surface Resistivity		ohms/square	>10 ¹³	ANSI/ESD STM 11.11
	Volume Resistivity		ohm-cm	>10 ¹⁵	D257
	Dielectric Constant	50% RH		3.7	D150
	Dielectric Strength	@ 60 Hz, 73 °F	V/mil	500	D149
Dissipation Factor	@ 60 Hz, 73 °F		0.005	D150	

Other	Properties	Condition	Units	Value	ASTM Test
	Moisture Absorption	@ 24 hrs, 73 °F	%	0.25	D570
	Moisture Absorption	@ Saturation, 73 °F	%	0.9	D570
	Flammability	UL 94		HB	
	Food Grade			Y	
Relative Cost			\$		

• The data stated above are typical values intended for reference and comparison purposes only.
• The data should not be used as a basis for design specifications or quality control.

• The information is provided as a guide to the best of our knowledge and given without obligation or liability.
• Testing under individual application circumstances is recommended