Delrin® 150 Acetal

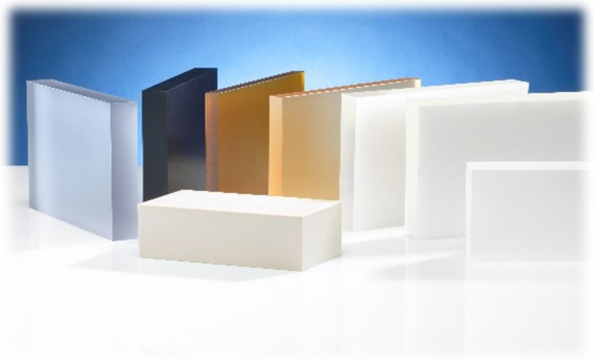
POM-H

Product Description

DuPont Delrin® is a homopolymer acetal which offers an excellent balance of properties that bridge the gap between metals and plastics. Delrin® shapes 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 Delrin® shapes ideal for many industrial applications.
Delrin® 150 acetal homopolymer offers slightly higher mechanical properties than acetal copolymer, but may contain a low density center (also known as "center line porosity") especially in large cross-sections. Delrin® also gives slightly less chemical resistance than copolymer acetal. As an example, Delrin® is ideal for small diameter, thin-walled bushings that benefit from the additional strength and rigidity of homopolymer acetal.

Applications
- Structural components
- Bearings, bushings, wear pads
- Gears
- Rollers
- Electrical components
- Jigs and fixtures
- Pump and valve parts

Characteristics
- Low moisture absorption
- Low coefficient of friction
- High strength and stiffness
- Excellent electrical properties
- Good chemical resistance
- Easy to fabricate



General

Plate: .031 through 5.00" thick
Plate sizes: 24x48 • 48x120
Extruded Rod: .187 through 10.00" diameter
Cut to size shapes and custom sizes available on request
Standard colors: Natural (white) & Black
ASTM D6778-20 POM0111 • ASTM D6100-17 S-POM0111 • FDA 21CFR177.2480 • NSF Std. 51 & 61

Physical	Nominal Value (English)		Test Method
Density	1.41	g/cm³	
Water Absorption			ASTM D570
24 hr, 73°F	0.25	%	
Saturation, 73°F	0.9	%	
Water Absorption (24 hr, 73°F)	1.4	%	ASTM D570
Mechanical	**Nominal Value (English)**		**Test Method**
Tensile Modulus (73°F)	350000	psi	ASTM D638
Tensile Strength (Yield)	11000	psi	ASTM D638
Tensile Elongation (Break, 73°F)	25	%	ASTM D638
Flexural Modulus (73°F)	470000	psi	ASTM D790

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Flexural Strength (73°F)	14000	psi	ASTM D790
Compressive Modulus	325000	psi	ASTM D695
Compressive Strength			ASTM D695
1% Strain	2600	psi	
10% Strain	15500	psi	
Shear Strength (73°F)	9800	psi	ASTM D732
Coefficient of Friction [3] (Dynamic)	0.2		ASTM D3702
Wear Factor [3]	55	10^-10 in³·min/ft·lb·hr	ASTM D3702

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	2	ft·lb/in	ASTM D256

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale, 73°F	94		
R-Scale, 73°F	120		
Durometer Hardness (Shore D)	84		ASTM D2240

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F)	2 ft·lb/in		ASTM D256

Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ASTM D785
M-Scale, 73°F	94		
R-Scale, 73°F	120		
Durometer Hardness (Shore D)	84		ASTM D2240

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed	336 °F		
264 psi, Unannealed	257 °F		
Melting Temperature	347 °F		ASTM D2133
CLTE - Flow	6.80E-05 in/in/°F		ASTM D696
Specific Heat	0.35 Btu/lb/°F		
Service Temperature			
Intermittent	300 °F		
Long term	185 °F		

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	> 1.0E+15 ohms·cm		
Dielectric Strength	500 V/mil		ASTM D149
Dielectric Constant [4] (73°F, 60 Hz)	3.7		ASTM D150
Dissipation Factor (73°F, 60 Hz)	5.00E-03		ASTM D150

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating (0.06 in)	HB		UL 94

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Chemical Resistance

Acetone	Resistant
Ammonia solution 10%	Resistant
Benzene	Limited resistance
Boric acid, aqueous solution 10%	Not resistant
Diesel oil	Resistant
Ethanol, 96%	Resistant
Ethylene chloride	Not resistant
Formaldehyde, aqueous solution 30%	Resistant
Glycerin	Resistant
Glycol	Resistant
Hydrochloric acid, aqueous solution 36%	Not resistant
Hydrofluoric acid, 40%	Not resistant
Isopropanol	Resistant
Methanol	Resistant
Nitric acid, aqueous solution 10%	Not resistant
Silicone Oil	Resistant
Sulphuric acid, aqueous solution 2%	Resistant
Sulphuric acid, concentrated 98%	Not resistant
Triethanolomine	Resistant
Trichloroethylene	Not resistant