ENSINGER-HYDE
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DELRIN®

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(Acetal Homopolymer)

DELRIN® is a crystalline plastic which offers an excellent balance of properties that bridge the gap between metals and plastics. DELRIN® 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® ideal for many industrial applications.

- **Good dimensional stability**
- **Low moisture absorption**
  DELRIN® can operate in wet environments with little effect on performance or dimensions.
- **Excellent machinability**
- **High fatigue endurance**
- **High strength and stiffness properties**
- **Superior impact and creep resistance**
- **Chemical resistance to fuels and solvents**
- **Natural grade is FDA, NSF and USDA compliant**
- **Good wear and abrasion properties**
  With its low coefficient of friction and hard and resilient surface, DELRIN® is the material of choice in many wear applications.

DELRIN®s overall combination of physical, tribological and environmental properties make it ideal for many industrial wear and mechanical applications. Parts exposed to a moist or wet environment, such as pump and valve components, are especially appropriate. Other common uses for DELRIN® include gears, bearings, bushings, rollers, fittings and electrical insulator parts.

TYPICAL PROPERTY VALUES

	PROPERTIES	ASTM Test Method	Units	Delrin® 150
PHYSICAL	Density	D792	lbs/in^3	0.0513
	Specific Gravity	D792	g/cc	1.42
	Water Absorption, @24 hours, 73°F	D570	%	0.25
	@Saturation, 73°F	D570	%	0.9
MECHANICAL	Tensile Strength @ Yield, 73°F	D638	psi	9,000
	Tensile Modulus	D639	psi	350,000
	Elongation @ Break, 73°F	D638	%	25
	Flexural Strength, 73°F	D790	psi	11,500
	Flexural Modulus, 73°F	D790	psi	420,000
	Compressive Strength	D695	psi	5,200
	Izod Impact Strength, 73°F	D256	ft-lbs/in	1.5
	Rockwell Hardness, 73°F	D785	M (R) Scale	M 94 (120)
	Shure Hardness	-	D Scale	-
	Wear Factor Against Steel, 40 psi, 50 fpm	D3702	$\frac{in^3}{hr} \times \frac{1}{PV}$	55×10^{-10}
		-		-
	Static Coefficient of Friction	D3702		-
	Dynamic Coefficient of Friction, 40 psi, 50 fpm	D3702		0.2
THERMAL	Heat Deflection Temperature @ 66 psi	D648	°F	336
	@264 psi	D648	°F	257
	Coefficient of Linear Thermal Expansion	D696	in/in/°F	6.8×10^{-5}
	Maximum Servicing Temperature, Intermittent	-	°F	300
	Long Term	UL746B	°F	185
	Specific Heat	-	BTU/lb-°F	0.35
	Thermal Conductivity	-	-	-
	Vicate Softening Point	-	°F	-
	Melting Point	D2133	°F	347
	Flammability	UL94		HB (1.47)
ELECTRICAL	Surface Resistivity	D257	ohm/square	-
	Volume Resistivity	D257	ohm-cm	10^{15}
	Dielectric Strength	D149	V/mil	500
	Dielectric Constant, @ 60 Hz, 73°F, 50% RH	D150		3.7
	@ 1 MHz	D150		3.7
	@ 20 GHz	D150		-
	@ 30 GHz	D150		-
	Dissipation Factor, @ 60 HZ, 73°F	D150		0.005

MATERIAL AVAILABILITY

Rods: Diameters: 4 3/4", 10' length
Length: 5" and greater diameter, 5' length

Plates: 1/4" to 2" thickness inclusive are 2' x 4', 4' x 8', 4' x 10'
2-1/4" to 4" thickness inclusive are 2' x 4'

Primary Specification (Resin) (Typical)
ASTM-D-4181 POM110B34330

Shapes Specification (Typical)
ASTM-D-6100 S-POM0111

Profiles, tubes, and special sizes are custom-produced on request.

MEMBER IAPD — ISO 9002 CERTIFIED

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