

ENSINGER-HYDE

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SAN DIEGO PLASTICS, INC.

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DELTRIN®

DELTRIN®

(Acetal Homopolymer)

DELTRIN® 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.

- **Good dimensional stability**
- **Low moisture absorption**
DELTRIN® 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, DELTRIN® is the material of choice in many wear applications.

DELTRIN®'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 DELTRIN® 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)
	Shore Hardness	-	D Scale	-
	Wear Factor Against Steel, 40 psi, 50 fpm	D3702	$\frac{\text{in}^3}{\text{hr}} \times \frac{1}{\text{PV}}$	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
@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		-	-	-
Vicat 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

This information is only to assist and advise you on current technical knowledge and is given without obligation or liability. All trade and patent rights should be observed. All rights reserved. Data obtained from extruded shapes material.

MATERIAL AVAILABILITY

Rods: Diameters: Up to 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.



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