

DELTRIN® Series Natural - Stock Shapes

Chemical Designation

POM-H (Polyacetal (Homopolymer))

Colour

white

Density

1.41 g/cm³

Main features

- good machinability
- high stiffness
- high fatigue strength
- high creep resistance
- good wear properties
- very good abrasion resistance

Target Industries

- food processing
- food engineering
- automotive industry
- conveyor technology
- construction industry
- mechanical engineering
- electronics
- fixture construction
- gear manufacturing
- home appliances

Mechanical properties	condition	value		test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	350,000	psi	ASTM D 638	
Tensile strength at yield		11,000	psi	ASTM D 638	
Elongation at break	@ 73 °F	25	%	ASTM D 638	
Flexural strength	@ 73 °F	14,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	420,000	psi	ASTM D 790	
Compression strength	@ 1% strain	3,600	psi	ASTM D 695	
Compression strength	@ 10% strain	15,500	psi	ASTM D 695	
Compression modulus		325,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.5	ft-lbs/in	-	
Rockwell hardness	@ 73 °F M Scale (R Scale)	94 (120)		ASTM D 785	
Coefficient of friction	Dynamic 40 psi, 50 fpm	.2		ASTM D 3702	
Wear rate	40 psi, 50 fpm	55*10 ⁻¹⁰	in ³ -min/ft-lbs-hr	ASTM D 3702	
Thermal properties	condition	value		test method	comment
Melting temperature		347	°F	ASTM D 2133	1) (1) Injection molded sample
Deflection temperature	@ 66 psi	336	°F	ASTM D 648	
Deflection temperature	@264 psi	257	°F	ASTM D 648	
Service temperature	Intermittent	300	°F	-	
Service temperature	Long Term	185	°F	-	
Thermal expansion (CLTE)		6.8*10 ⁻⁵	in/in/°F	ASTM D 696	
Specific heat		0.35	BTU/lb-F°	-	
Electrical properties	condition	value		test method	comment
Volume resistivity		> 10 ¹⁵	Ω*cm	ASTM D257	
Dielectric strength		500	V/mil	ASTM D 149	
Dissipation factor	@ 60 Hz, 73 °F	.005		ASTM D 150	
Dielectric constant	@ 60 Hz, 73 °F, 50% RH	3.7		ASTM D 150	
Other properties	condition	value		test method	comment
Moisture absorption	@ saturation, 73 °F	.90	%	ASTM D 570	(1) 1.47mm injection mold
Moisture absorption	@ 24 hrs, 73 °F	.25	%	ASTM D 570	
Flammability (UL94)	UL 94	HB		-	1)

→ Resin specification:
ASTM D6778-06 POM0111 superseding ASTM D4181-00 POM111
Shapes specification:
ASTM D6100-11 S-POM0111

This information reflects the current state of our knowledge and is intended only to assist and advise. It is given without obligation or liability. It does not assure or guarantee chemical resistance, quality of products or their suitability in any legally binding way. Values are not minimum or maximum values, but guidelines that can be used for comparative purposes in material selection. They are within the normal range of product properties and do not represent guaranteed property values. Testing under individual application circumstances is always recommended. Data is obtained from extruded shapes material unless otherwise noted. References to FDA compliance refer to the resins from which the products were made unless otherwise noted. All trade and patent rights should be observed. All rights reserved. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com.