

DELTRIN Acetal Homopolymer - Stock Shapes

Chemical Designation

POM-H (Polyacetal (Homopolymer))

Colour

white black

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

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

Mechanical properties	condition	value		test method	comment
Modulus of elasticity (tensile test)		450,000	psi	ASTM D 638	(1) 1% strain, injection molded
Tensile strength at yield		11,000	psi	ASTM D 638	
Elongation at break	@ 73 °F	25	%	ASTM D 638	
Flexural strength	@ 73 °F	11,500	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	420,000	psi	ASTM D 790	
Compression strength		5,200	psi	ASTM D 695	1)
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 (2) per UL746B
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	-	2)
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	@ 24 hrs, 73 °F	.25	%	ASTM D 570	(1) 1.47mm injection mold
Moisture absorption	@ saturation, 73 °F	.90	%	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