

## DELIN 511 Series Acetal Homopolymer - Stock Shapes (rods, plates, tubes)

### Chemical Designation

POM-H (Polyacetal (Homopolymer))

### Colour

white

### Density

1.42 g/cm<sup>3</sup>

### 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) public source data (2) publicly sourced data
Tensile strength at yield		10,000	psi	ASTM D 638	
Elongation at yield (tensile test)	@ 73 °F	18	%	ASTM D 638	
Elongation at break (tensile test)	@ 73 °F	25	%	ASTM D 638	
Flexural strength	@ 73 °F	16,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	520,000	psi	ASTM D 790	
Compression strength	@ 73 °F, 1% strain	2,100	psi	ASTM D 695	
Compression strength	@ 73 °F, 10% strain	16,500	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.25	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F M Scale (R Scale)	95		ASTM D 785	
Coefficient of friction	Static 40 psi	0.20	%	ASTM D 3702	1)
Coefficient of friction	Dynamic 40 psi, 50 fpm	0.35		ASTM D 3702	2)
Wear rate	40 psi, 50 fpm	55*10 <sup>-10</sup>	in <sup>3</sup> -min/ft-lbs-hr	ASTM D 3702	
Thermal properties	condition	value		test method	comment
Melting temperature		352	°F	DIN EN ISO 11357	1)
Deflection temperature	@ 66 psi	325	°F	ISO-R 75 Method B	2)
Deflection temperature	@264 psi	225	°F	ISO-R 75 Method A	3)
Service temperature	Intermittent	300	°F	-	
Service temperature	Long Term	185	°F	-	4)
Thermal expansion (CLTE)		6.8*10 <sup>-5</sup>	in/in/°F	ASTM D 696	
Specific heat		0.35	BTU/lb-F°	-	
Electrical properties	condition	value		test method	comment
volume resistance		> 10 <sup>15</sup>	Ω*cm	ASTM D257	
Other properties	condition	value		test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.20	%	ASTM D 570	
Moisture absorption	@ saturation, 73 °F	.90	%	ASTM D 570	

→ Resin specification:  
ASTM D6778 POM0113 (ASTM D4181 withdrawn 2005, Replaced by D6778)  
Shapes specification:  
ASTM D6100 S-POM0112

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](http://www.ensingerplastics.com).