

## TECAFORM® AD EF natural - Stock Shapes (rods, plates, tubes)

### Chemical Designation

POM-H (Polyacetal (Homopolymer))

### Colour

white

### Density

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

### Main features

- 100% bio-based
- good slide and wear properties
- made from FDA compliant resin
- high strength
- good chemical resistance
- good machinability
- high fatigue strength
- electrically insulating

### Target Industries

- mechanical engineering
- power engineering
- aircraft and aerospace technology
- food technology
- electronics
- automotive industry

Mechanical properties	condition	value	unit	test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	386,000	psi	ASTM D 638	
Tensile strength at yield		11,100	psi	ASTM D 638	
Elongation at break (tensile test)	@ 73 °F	61	%	ASTM D 638	
Flexural strength	@ 73 °F	13,400	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	520,600	psi	ASTM D 790	
Compression strength	@73°F; 10% strain	14,340		ASTM D 695	
Compression strength	@ 1% strain	3,890	psi	ASTM D 695	
Compression modulus	@73°F	463,200	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	2.7	ft-lbs/in	ASTM D 256	
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 <sup>-10</sup>	in <sup>3</sup> -min/ft-lbs-hr	ASTM D 3702	
Thermal properties	condition	value	unit	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 <sup>-5</sup>	in/in/°F	ASTM D 696	
Specific heat		0.35	BTU/lb-F°	-	
Electrical properties	condition	value	unit	test method	comment
volume resistance		> 10 <sup>15</sup>	Ω*cm	-	
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	unit	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	.134	%	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 D6778-20 POM0111 superseding ASTM D4181-00 POM111  
Shapes specification:  
ASTM D6100-17 S-POM0111

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