TECAFORM® AD natural (DELRIN® 150 Series) - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-H (Polyacetal (Homopolymer))

Colour
white

Density
1.41 g/cm^3

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	unit	test method		comment
Modulus of elasticity (tensile test)	@ 73 °F	350,000	psi	ASTM D 638		(1) per ASTM D732
Tensile strength at yield		11,000	psi	ASTM D 638		
Elongation at break (tensile test)	@ 73 °F	25	%	ASTM D 638		
Flexural strength	@ 73 °F	14,000	psi	ASTM D 790		
Modulus of elasticity (flexural test)	@ 73 °F	470,000	psi	ASTM D 790		
Compression strength	@ 1% strain	2,600	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	2.0	ft-lbs/in	-		
Rockwell hardness	@ 73 °F M Scale (R Scale)	94 (120)		ASTM D 785		
Shore hardness	D scale	84		ASTM D 2240		
Coefficient of friction	Dynamic 40 psi, 50 fpm	.2		ASTM D 3702		
Wear rate	40 psi, 50 fpm	$55*10^{-10}$	in³-min/ft-lbs-hr	ASTM D 3702		
Shear strength	@ 73 °F	9800	psi	-	1)	

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)		$6.8*10^{-5}$	in/in/°F	ASTM D 696		
Specific heat		0.35	BTU/lb-F°	-		

Electrical properties	condition	value	unit	test method	comment
volume resistance		$> 10^{15}$	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	.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 D6778-20 POM0111
  Shapes specification:
  ASTM D6100-17 S-POM0111

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