

Plastic

Physical Properties

ASTM Method	Injection Molded									Extruded		
	Acetal	Acrylic	Nylon	Polyamide-imide	Polycarbonate	Polyethylene High Density	Polyethylene Low Density	Polypropylene	Polystyrene	Polycarbonate	TFE	
General												
Specific Gravity	D792	1.42	1.19	1.14	1.38	1.20	0.96	0.91	0.902	1.05	1.2	2.14-2.24
Water Absorption (method A, 24hr)%	D570	0.25	0.3	1.2	-	0.15	-	-	0.2	-	0.15	0.01
Tensile Strength at Yield, 1000 psi	D638	10.0	10.5	11.2 12.0	27.8	9	4.2	1.35	5.07	7.5	8-9.5	2.5-6
Elongated at Yield, %	D638	40	5	5.25	15	7	900	590	12	-	60-100	150-600
Elastic Modulus In Tension, 10 ³ psi	D638	4.5	4.3	-	7	3.45	-	-	-	4.5	3.2	0.95-1.15
Flexural Strength In Tension, 10 ³ psi	D790	14.1	15	-	34.9	13.5	-	-	-	12.5	11-13	no break
Elastic Modulus in Flexure, 10 ³ psi	D790	4.1	4.5	4.12 1.75	7.3	3.4	-	-	25	-	-	0.7-1.1
Compressive Strength at Yield, 1000 psi	D695	5.2	17	-	32.1	12.5	-	-	-	-	11	-
Rockwell Hardness (Method A)	D785	M94 R120	M96	R121 R108	E86	M70 R118	-	-	99	M75	M70 R118	D50-D65
Izod Impact Strength, ft-lb/in.	D256	-	-	-	-	-	-	-	-	-	-	-
1/8 in. specimen, notched	-	1.4	-	-	2.7	12-16	0.9	-	0.8	-	-	-
1/4 in. specimen, notched	-	-	0.4	1.0 2.1	-	2-3	-	-	-	0.40	-	-
Thermal & Electrical												
Deflection Temperature, °F	D648	-	-	-	-	-	-	-	212	-	-	-
At 66 psi Fiber Stress	-	342	201	455	-	280	-	-	-	200	-	-
At 264 psi Fiber Stress	-	277	199	194	532	270	-	-	-	-	-	-
Max. Recommended Service Temp., °F	-	-	180	185	450	240	-	-	-	-	-	550* (288)
Coeff. of Linear Thermal Expansion, °F	D696	5.8E-5	3.5E-5	4.9E-9	17E-6	3.8E-5	-	-	-	-	-	5.5 x 10 ⁵
Underwriters Lab Rating (Subj 94)	-	HB	HB	V-2	ULV-0	V-2	-	-	-	-	-	-
Dielectric Strength (short time) v/mil	D149	500	-	-0.600	580	380	-	-	-	-	400	2000
Volume Resistivity, ohm-cm	D257	1E15	1E18	1E15 1E13	1E16	1E16	-	-	-	-	2.1x 10 ¹⁵	>10 ¹⁵
Arc Resistance (SS Electrode), sec.	D495	220	-	-	125	11	-	-	-	-	10-120	-

Representative Tradenames or Manufacturer

① Delrin ⑦ Plexiglas ⑩ Zytel ④ Torlon ⑤ Lexan Chevron Dow Chemical ⑧ Tenite Nova ⑥ Lexan ⑨ Teflon
 ② Celcon

Symbols indicate respective tradenames of the following corporations:
 ① DuPont Co. ② Celanese Engineering Resins, Inc. ③ Eastman Kodak ④ Solvay Advanced Polymers, Inc.
 ⑤ General Electric Plastics ⑥ Bassell ⑦ Ato Haas North America, Inc.

Notes: A Values are typical, however there may be some variations due to resin manufacturing processes and ball manufacturing techniques.
 B Plastics listed are standard types most commonly in demand. Information on other types is available upon request.
 C Source of data: various resin manufacturers.
 D Except for extruded materials, virtually any color is available for most injections molded materials.

www.hooverprecision.com



Corporate Office
 Hoover Precision Products, Inc.
 2200 Pendley Road
 Cumming, Georgia 30041
 Telephone: 770-889-9223
 Fax: 770-889-0828

Sales Office
 Hoover Precision Products, LLC
 1390 Industrial Park Drive
 Sault Ste. Marie, MI 49783
 Telephone: 906-632-7310
 Fax: 906-632-7555

Email: sales@hooverprecision.com

