

### TYPICAL PROPERTIES OF ACETALS

ASTM or UL Test	Property	Copolymer	Homopolymer
PHYSICAL			
D792	<b>Specific gravity</b>	1.41	1.42
D792	<b>Specific volume</b> (in <sup>3</sup> /lb)	19.7	19.5
D570	<b>Water absorption</b> , 24 h, 1/8-in thk (%)	0.22	0.25
MECHANICAL			
D638	<b>Tensile strength*</b> (psi)		
	At 73°F	8,800	10,000
	At 160°F	5,000	6,900
D638	<b>Elongation*</b>	55	40
D638	<b>Tensile modulus</b> (10 <sup>5</sup> psi)	4.1	5.2
D790	<b>Flexural strength</b> (psi)	13,000	14,100
D790	<b>Flexural modulus</b> (10 <sup>5</sup> psi)		
	At 73°F	3.75	4.10
	At 160°F	1.80	2.30
D256	<b>Impact strength</b> , Izod (ft-lb/in)		
	Notched	1.3	1.4
	Unnotched	20	24
D671	<b>Fatigue endurance limit</b> , 10 <sup>7</sup> cycles (psi)	3,300	4,300
D785	<b>Hardness</b> , Rockwell M	80	94
FRICTIONAL			
—	<b>Coefficient of friction</b>		
	Self	0.35	0.3
	Against steel	0.15	0.15
THERMAL			
C177	<b>Thermal conductivity</b> (10 <sup>4</sup> cal-cm/sec-cm <sup>2</sup> -°C)	5.5	8.9
	(Btu-in/hr-ft <sup>2</sup> -°F)	1.6	2.6
D696	<b>Coefficient of thermal expansion</b> -40 to +185°C (10 <sup>-5</sup> in/in-°C)	8.5	10.0
D648	<b>Deflection temperature</b> (°F)		
	At 264 psi	205	277
	At 66 psi	316	300
UL94	<b>Flammability rating</b>	HB	HB
ELECTRICAL			
D149	<b>Dielectric strength</b> , Short time (V/mil)		
	5 mils	2,100	3,000
	20 mils	—	2,000
	90 mils	500	500
D150	<b>Dielectric constant</b>		
	At 1 kHz	3.7	3.7
	At 1 MHz	0.006	0.005
D257	<b>Volume resistivity</b> (ohm-cm)		
	At 73°F, 50% RH	10 <sup>14</sup>	10 <sup>15</sup>
D495	<b>Arc resistance</b> (s), 120 mils	240 (burns)	220 (burns, no tracking)

\*At 0.2 in/min loading rate

These products are available from



**Aetna Plastics**  
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