

**Acetal (Extruded) Material Properties**

Physical Properties		Test Method ASTM
Specific Gravity	1.41 – 1.42	D792
Tensile Strength (73° F, psi)	8,800 – 12,000	D638
Tensile Modulus of Elasticity (73° F)	410,000 – 520,000	D638
Elongation (73° F)	12 – 75	D638
Flexural Strength (73° F)	13,000 – 15,500	D790
Flexural Modulus of Elasticity (73° F)	375,000 – 550,000	D790
Shear Strength (73° F)	7,700 – 9,500	D790
Compressive Strength (10% Def., psi)	16,000 – 18,000	D695
Compressive Modulus of Elasticity (73° F, psi)	--	D695

Mechanical Properties		Test Method ASTM
Coefficient of Friction Dynamic (Dry vs. Steel)	0.15 – 0.35	--
Hardness (Rockwell, 73°F)	R119 – 122	D785
Hardness (Durometer, 73°F)	2.3	D676
Tensile Impact (73° F, ft lb./in ²)	40 – 90	D1822
Coefficient Linear Thermal Exp. (in/in/°F)	4.2-4.7×10 ⁻⁵	D696
Deformation Under Load (122 °F, 2000 psi, %)	0.3 – 1.0	D621

Temperature Properties		Test Method ASTM
Deflection Temperature at 264 psi (°F)	230 – 255	D648
Deflection Temperature at 66 psi (°F)	316 – 338	D648
Melting Point (°F)	329 – 347	D789
Cont. Service Temp in Air, Max (°F)	180	--
Dielectric Strength Short Time (Volts/mil)	380 – 500	D149
Volume Resistivity (OHM-CM)	1×10 ¹⁴ -10 ¹⁵	D257
Dielectric Constant 60 Hz	3.7	D150
Dielectric Constant 10 ³ Hz	3.7	D150
Dielectric Constant 10 ⁵ Hz	3.7	D150

Environmental Properties		Test Method ASTM
Water Absorption Immersion at 24 Hours (%)	0.12 – 0.25	D570
Water Absorption Immersion Saturation (%)	0.80 – 0.90	D570
Acid Weak (73° F)	Acceptable	--
Acid Strong (73° F)	Unacceptable	--
Alkali Weak (73° F)	Acceptable	--
Alkali Strong (73° F)	Unacceptable	--
Hydrocarbons, Aromatic (73 °F)	Acceptable	--
Hydrocarbons, Aliphatic (73 °F)	Acceptable	--
Ketones (73 °F)	Acceptable	--
Ethers (73 °F)	Acceptable	--
Esters (73 °F)	Acceptable	--
Alcohols (73 °F)	Acceptable	--
Inorganic Salt Solutions (73 °F)	--	--
Continuous Sunlight (73 °F)	--	--

Note: Property data shown are typical average values and will vary based on specific production lots and by size and product configuration. They should be used only as a guide to primary selection for the application of a given material and never for purchase specifications. All values shown are based on bone dry specimens.