



TYPICAL PROPERTIES of ACETALS

| ASTM or UL test | Property | Acetal Copolymer | Delrin [®] Homopolymer | Delrin [®] AF PTFE-filled |
|-------------------|-----------------------------------------------------------------------------------------------|------------------|---------------------------------|------------------------------------|
| PHYSICAL | | | | |
| D792 | Density (lb/in ³) (g/cm ³) | 0.051 1.41 | 0.051 1.41 | 0.054 1.50 |
| D570 | Water Absorption, 24 hrs (%) | 0.2 | 0.2 | 0.2 |
| MECHANICAL | | | | |
| D638 | Tensile Strength (psi) | 9,500 | 11,000 | 8,000 |
| D638 | Tensile Modulus (psi) | 400,000 | 450,000 | 435,000 |
| D638 | Tensile Elongation at Break (%) | 30 | 30 | 15 |
| D790 | Flexural Strength (psi) | 12,000 | 13,000 | 12,000 |
| D790 | Flexural Modulus (psi) | 400,000 | 450,000 | 435,000 |
| D695 | Compressive Strength (psi) | 15,000 | 16,000 | 16,000 |
| D695 | Compressive Modulus (psi) | 400,000 | 450,000 | 350,000 |
| D785 | Hardness, Rockwell | M88 / R120 | M89 / R122 | M85 / R115 |
| D256 | IZOD Impact Notched (ft-lb/in) | 1.0 | 1.0 | 0.7 |
| THERMAL | | | | |
| D696 | Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F) | 5.40 | 4.70 | 5.00 |
| D648 | Heat Deflection Temp (°F / °C) at 264 psi | 220 / 104 | 250 / 121 | 244 / 118 |
| D3418 | Melting Point Temp (°F / °C) | 335 / 168 | 347 / 175 | 347 / 175 |
| - | Max Operating Temp (°F / °C) | 180 / 82 | 180 / 82 | 180 / 82 |
| C177 | Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C) | 1.6 5.5 | 2.5 8.6 | - |
| UL94 | Flammability Rating | HB | HB | HB |
| ELECTRICAL | | | | |
| D149 | Dielectric Strength (V/mil) short time, 1/8" thick | 420 | 450 | 400 |
| D150 | Dielectric Constant at 1 MHz | 3.8 | 3.7 | 3.1 |
| D150 | Dissipation Factor at 1 MHz | 0.005 | 0.005 | 0.010 |
| D257 | Volume Resistivity (ohm-cm) at 50% RH | 10 ¹⁵ | 10 ¹⁵ | 3.0 x 10 ¹⁶ |