

|   |                  | Acetron GP Acetal           | Delrin Acetal                 | Delrin 570 Blend                 | 25% Glass-Filled Acetal Copolymer | Delrin AF-Filled Acetal     | Acetron NS-Filled Acetal | Delrin 500 CL              |                   |
|---|------------------|-----------------------------|-------------------------------|----------------------------------|-----------------------------------|-----------------------------|--------------------------|----------------------------|-------------------|
| Mechanical  | ASTM Test Method | Polyoxy-methylene Copolymer | Polyoxy-methylene Homopolymer | 20% Glass-Filled POM Homopolymer | 25% Glass-Filled POM Homopolymer  | PTFE-Filled POM Homopolymer | Lubricated POM Copolymer | Lubricated POM Homopolymer | Units             |
| Strength to Weight Ratio                            | -                | -                           | -                             | -                                | -                                 | -                           | -                        | -                          | ksi               |
| Specific Gravity @73 F                              | D792             | 1.41                        | 1.41                          | 1.56                             | 1.59                              | 1.5                         | 1.44                     | 1.42                       | -                 |
| Tensile Strength @73 F, (ult)/(yld)                 | D638             | 9,500 (ult)                 | 11,000 (ult)                  | 8,500 (ult)                      | 16,000 (yld)                      | 8,000 (ult)                 | 7,500 (ult)              | 9,500 (yld)                | psi               |
| Tensile Modulus of Elasticity @73 F                 | D638             | 400,000                     | 450,000                       | 900,000                          | 1,200,000                         | 435,000                     | 400,000                  | 450,000                    | psi               |
| Tensile Elongation at Break @73 F                   | D638             | 30                          | 30                            | 12                               | 2-3%                              | 15                          | 10                       | 40                         | %                 |
| Flexural Strength @73 F                             | D790             | 12,000                      | 13,000                        | 10,700                           | -                                 | 12,000                      | 15,000                   | 13,000                     | psi               |
| Flexural Modulus of Elasticity @73 F                | D790             | 400,000                     | 450,000                       | 730,000                          | 1,050,000                         | 445,000                     | 400,000                  | 400,000                    | psi               |
| Shear Strength @73 F                                | D732             | 8,000                       | 9,000                         | -                                | -                                 | 76,000                      | 6,000                    | -                          | psi               |
| Comprehensive Strength, (% Deformation) @73 F       | D695             | 15,000 (10)                 | 16,000 (10)                   | -                                | -                                 | 16,000 (10)                 | 15,000 (10)              | 4,500 (10)                 | psi               |
| Comprehensive Modulus of Elasticity @73 F           | D695             | 400,000                     | 450,000                       | -                                | -                                 | 350,000                     | 315,000                  | -                          | psi               |
| Hardness, Rockwell, Scale as noted @73 F            | D785             | M88 (R120)                  | M89 (R122)                    | M90 (R118)                       | M80                               | M85 (R115)                  | M85 (R116)               | M90 (R120)                 | -                 |
| Hardness, Durometer, Shore D @73 F                  | D2240            | D85                         | D86                           | -                                | -                                 | D83                         | D83                      | -                          | -                 |
| Izod Impact, (Notched) @73 F                        | D256 Type A      | 1                           | 1                             | 0.8                              | 1.1                               | 0.7                         | 0.7                      | 1.4                        | ft-lb/in of notch |
| Coefficient of Friction, (Dry vs Steel) Dynamic     | -                | 0.25                        | 0.25                          | 0.34                             | -                                 | 0.19                        | 0.2                      | -                          | -                 |
| Limiting PV, (with 4 to 1 factor of safety applied) | -                | 2,700                       | 2,700                         | -                                | -                                 | 7,500                       | 7,500                    | -                          | psi-ft/min        |
| Thermal   | ASTM Test Method | Polyoxy-methylene Copolymer | Polyoxy-methylene Homopolymer | 20% Glass-Filled POM Homopolymer | 25% Glass-Filled POM Homopolymer  | PTFE-Filled POM Homopolymer | Lubricated POM Copolymer | Lubricated POM Homopolymer | Units             |
| Coefficient of Linear Thermal Expansion @73 F       | E-831 (TMA)      | 5.40E-04                    | 4.70E-05                      | 4.50E-05                         | 2.20E-05                          | 5.00E-05                    | 4.70E-05                 | 6.80E-05                   | in/in/F           |
| Heat Deflection Temperature @264 psi                | D648             | 220                         | 250                           | 316                              | 322                               | 244                         | 250                      | 257                        | F                 |
| Tg-Glass transition temperature, (Amorphous)        | D3418            | -                           | -                             | -                                | -                                 | -                           | -                        | -                          | F                 |
| Melting Point, (VS=Vicat Softening Temp.)           | D3418            | 335                         | 347                           | 347                              | -                                 | 347                         | 347                      | 347                        | F                 |
| Continuous Service Temperature in Air, (Max.)       | -                | 180                         | 180                           | 185                              | -                                 | 180                         | 180                      | -                          | F                 |
| Thermal Conductivity                                | -                | 1.6                         | 2.5                           | -                                | -                                 | -                           | -                        | -                          | BTU-in / hr-ft2-F |
| Electric  | ASTM Test Method | Polyoxy-methylene Copolymer | Polyoxy-methylene Homopolymer | 20% Glass-Filled POM Homopolymer | 25% Glass-Filled POM Homopolymer  | PTFE-Filled POM Homopolymer | Lubricated POM Copolymer | Lubricated POM Homopolymer | Units             |
| Dielectric Strength, Short Term                     | D149             | 420                         | 450                           | 490                              | -                                 | 400                         | 350                      | 400                        | Volts/mil         |
| Volume Resistivity                                  | D257             | 1.00E+17                    | 1.00E+15                      | 5.00E+14                         | -                                 | 3.00E+16                    | 1.00E+15                 | 1.00E+15                   | ohm-cm            |
| Dielectric Constant @10E6 Hz                        | D150             | 3.8                         | 3.7                           | -                                | -                                 | 3.1                         | -                        | 3.5                        | -                 |
| Dissipation Factor @10E6 Hz                         | D150             | 0.005                       | 0.005                         | 0.006                            | -                                 | 0.01                        | -                        | 0.006                      | -                 |
| Flammability @3.1 mm unless noted                   | UL94             | HB                          | HB                            | HB                               | -                                 | HB                          | HB                       | HB (0.78mm)                | -                 |
| H2O   | ASTM Test Method | Polyoxy-methylene Copolymer | Polyoxy-methylene Homopolymer | 20% Glass-Filled POM Homopolymer | 25% Glass-Filled POM Homopolymer  | PTFE-Filled POM Homopolymer | Lubricated POM Copolymer | Lubricated POM Homopolymer | Units             |
| Water Absorption, Immersion, 24 hours               | D570(7)          | 0.2                         | 0.2                           | 0.25                             | 0.29                              | 0.2                         | 0.2                      | 0.27                       | % by weight       |
| Water Absorption, Saturation                        | D570(7)          | 0.9                         | 0.9                           | 1                                | -                                 | 1                           | 0.9                      | 0.9                        | % by weight       |