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## QUADRANT

**Ertalylite® PET-P** offers dimensional stability coupled with excellent wear resistance, low coefficient of friction, high strength, and resistance to moderate acid solutions. Ertalylite's properties make it especially suitable for the manufacture of precision mechanical parts which are capable of sustaining high loads and enduring wear conditions.

Ertalylite® has a continuous service temperature of 210°F (100°C) and its melting point is almost 150°F higher than acetals.

Ertalylite® is FDA compliant in natural and black colors. Natural Ertalylite is also USDA, 3A-Dairy and Canada AG compliant. Is an excellent candidate for parts used in the food processing and equipment industries.

**Ertalylite® TX** is an internally lubricated version of PET-P, providing enhanced wear and inertness over general purpose nylons or acetals. Containing uniformly dispersed solid lubricant, Ertalylite TX provides a lower wear rate and coefficient of friction than unmodified PET or PBT and even internally lubricated materials such as Delrin® AF

### ADVANTAGES:

· Good For Both Wet And Dry Environments · High Strength And Rigidity · Ideal For Close Tolerance Parts · Excellent Stain Resistance · Good Wear Resistance And Excellent Dimensional Stability · Better Resistance To Acids Than Nylon or Acetal

### APPLICATIONS INCLUDE:

· Food Equipment Components · Manifolds · Carousel · Filter Track · Locating Disk And Ring · Distribution Valves · Fuel Pump Components · Fuel System Connector And Rotors

| GENERAL PROPERTIES                                       | Test Methods<br>ISO / (IEC) | ERTALYTE<br>PET-P  | ERTALYTE<br>TX     |
|--|-----------------------------|--------------------|--------------------|
| <b>COLOUR</b>  |                             | ○ White<br>● Black | ● Pale Grey        |
| <b>PHYSICAL</b>  |                             |                    |                    |
| Specific Gravity (g/cm <sup>3</sup> )                    | D792                        | 1.41               | 1.44               |
| Water Absorption, 24 hrs (%)                             | D570                        | 0.07               | 0.06               |
| <b>MECHANICAL @ 73°K</b>                                 |                             |                    |                    |
| Tensile Strength (psi)                                   | D638                        | 12,400             | 10,500             |
| Tensile Elongation at Break (%)                          | D638                        | 20                 | 5                  |
| Tensile Modulus (psi)                                    | D638                        | 460,000            | 500,000            |
| Flexural Strength (psi)                                  | D710                        | 18,000             | 14,000             |
| Flexural Modulus (psi)                                   | D790                        | 49,000             | 36,000             |
| Compressive Strength (psi)                               | D695                        | 15,000             | 15,250             |
| Compressive Modulus (psi)                                | D695                        | 420,000            | 400,000            |
| Rockwell Hardness  | D785                        | M 93               | M 94               |
| IZOD Notched Impact (ft-lb/in)                           | D256                        | 0.5                | 0.4                |
| <b>THERMAL</b>   |                             |                    |                    |
| Coeff. of Thermal Expansion (x10 <sup>-5</sup> in/in/°F) | D831                        | 3.3                | 4.5                |
| Heat Deflection Temp (°F / °C) @ 264 psi                 | D648                        | 240 / 116          | 180 / 82           |
| Melting Temp (°F / °C)                                   | D3418                       | 491 / 225          | 481 / 225          |
| Max Operating Temp (°F / °C)                             | -                           | 218 / 99           | 210 / 199          |
| Thermal Conductivity (BTU-in/ft <sup>2</sup> -hr-°F)     | F433                        | 2                  | 1-9                |
| Flammability Rating                                      | UL-94                       | HB                 | HB                 |
| <b>ELECTRICAL</b>  |                             |                    |                    |
| Dielectric Strength (V/mil) short time                   | D149                        | 385                | 533                |
| Dielectric Constant at 1 MHz                             | D150                        | 3.4                | 3.6                |
| Dielectric Constant at 1 MHz                             | D150                        | 0.02               | 0.02               |
| Surface Resistivity (ohm/sq) at 50% RH                   | EOS/ESD S11.11              | > 10 <sup>13</sup> | > 10 <sup>13</sup> |

NOTE: The information contained here in is typical values intended for reference only. They should NOT be used as a basis for design specifications or quality control.