

## Hydel® PEI-7 ESD - DISCONTINUED (Static Dissipative Polyetherimide)

Hydel® PEI-7 is a discontinued static-dissipative, high-temperature, polyetherimide-based thermoplastic product that has been filled with graphite "nanotube" microfibers. Unlike conventional carbon products, this technology allows for superior dimensional stability after machining, consistent electrical properties, excellent surface quality, and minimal sloughing. Hydel® PEI-7 has excellent workability, consistent filler dispersement, and very good impact strength.

| Property  | ASTM Test Method | Units                    | Hydel® PEI-7                      |
|---|------------------|--------------------------|-----------------------------------|
| <b>Physical</b>                                   |                  |                          |                                   |
| Density   | D792             | lb/in <sup>3</sup>       | 0.046                             |
| Specific Gravity                                  | D792             | g/cc                     | 1.26                              |
| Water Absorption, 24hrs                           | D570             | %                        | 0.25                              |
| <b>Mechanical</b>                                 |                  |                          |                                   |
| Tensile Strength, Break                           | D638             | psi                      | 9,400                             |
| Tensile Modulus                                   | D638             | psi                      | 400,000                           |
| Tensile Elongation, Break                         | D638             | %                        | 4                                 |
| Flexural Strength                                 | D790             | psi                      | 16,250                            |
| Flexural Modulus                                  | D790             | psi                      | 424,000                           |
| Compressive Strength                              | D695             | psi                      | 16,200                            |
| Izod Impact, Notched                              | D256             | ft-lb/in                 | 1.4                               |
| Hardness, Rockwell                                | D785             |                          | R123                              |
| <b>Thermal</b>                                    |                  |                          |                                   |
| Coefficient of Linear Thermal Expansion           | E831             | in/in/°F                 | $2.9 \times 10^{-5}$              |
| Heat Deflection Temp at 264 psi                   | D648             | °F                       | 390                               |
| Max Operating Temp                                |                  | °F                       | 340                               |
| Flammability                                      | UL94             |                          | V-0                               |
| <b>Electrical</b>                                 |                  |                          |                                   |
| Surface Resistivity<br>@ 10 V<br>@ 100 V          | EOS/ESD S11.11   | ohm/square<br>ohm/square | $10^8 - 10^{10}$<br>$10^6 - 10^8$ |
| Volume Resistivity at 50% RH<br>@ 10 V<br>@ 100 V | ESD-STM 11.12    | ohm-cm<br>ohm-cm         | $10^8 - 10^{10}$<br>$10^6 - 10^8$ |
| Static Decay                                      | FTMS-101C        | sec                      | 0.004                             |

**NOTE:** The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. All values at 73°F (23°C) unless otherwise noted.

**PLEASE NOTE:** This material is no longer commercially available or produced.