

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

Hydel® PEI-7 is a 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 dispersion, 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 x 10 <sup>-5</sup>
Heat Deflection Temp at 264 psi	D648	°F	390
Max Operating Temp		°F	340
Flammability	UL94		V-0
<b>Electrical</b>			
Surface Resistivity @ 10 V @ 100 V	EOS/ESD S11.11	ohm/square ohm/square	10 <sup>8</sup> – 10 <sup>10</sup> 10 <sup>6</sup> – 10 <sup>8</sup>
Volume Resistivity at 50% RH @ 10 V @ 100 V	ESD-STM 11.12	ohm-cm ohm-cm	10 <sup>8</sup> – 10 <sup>10</sup> 10 <sup>6</sup> – 10 <sup>8</sup>
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. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.*