



**ENGINEERED PLASTICS FOR
THE WORLD'S TOUGHEST REQUIREMENTS**

CUSTOM ESD

fixturing & carriers

ESd fixturing & carriers

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Semitron® ESd is a family of static dissipative products designed for use where electrical discharge in operation is a problem. They are commonly used for sensitive electronic components including integrated circuits, hard disk drives, and circuit boards. Semitron® products are also an excellent choice for material handling applications, and components in high speed electronic printing and reproducing equipment. Semitron® ESd products are inherently dissipative. They do not rely on atmospheric phenomena (humidity) to activate, nor are surface treatments used to achieve dissipation. Static electricity is dissipated through these products as readily as it is dissipated along the surface.

Static Dissipation (Surface Resistivity, ohms/sq.)	
Semitron® ESd 225	$10^{10} - 10^{12}$
Semitron® ESd 300	$10^5 - 10^9$
Semitron® ESd 410C	$10^4 - 10^6$
Semitron® ESd 420	$10^6 - 10^9$
Semitron® ESd 480	$10^6 - 10^9$
Semitron® ESd 500HR	$10^{10} - 10^{12}$
Semitron® ESd 520HR	$10^{10} - 10^{12}$

Semitron® ESd 225 Static Dissipative Acetal (POM)

Semitron® ESd 225 is a static dissipative acetal. This material has the same general properties as unfilled acetal, but with static dissipative properties throughout – resistivity in the range of 10^{10} to 10^{12} . It may be used to temperatures of 225°F (107°C) without degradation. Semitron® ESd 225 offers broad chemical resistance and good wear resistance.

Semitron® ESd 300 Static Dissipative PET

Semitron® ESd 300 is a static dissipative polyethylene terephthalate. This material has the same general properties as unfilled PET-P (Ertalyl®), but with static dissipative properties throughout – resistivity in the range of 10^{10} to 10^{12} . It may be used to temperatures of 300°F (1148°C) without degradation. Semitron® ESd 300 offers broad chemical resistance and good wear resistance.

Semitron® ESd 410c Static Dissipative Ultem (PEI)

Semitron® ESd 420 is a static dissipative PolyEtherImide. This material has the same general properties as PEI but with static dissipative properties throughout – resistivity in the range of 10^6 to 10^9 . It is thermally stable to temperatures of 420°F (215°C) without degradation.

Semitron® ESd 480 Static Dissipative PEEK

Semitron® ESd 480 is a static dissipative reinforced PolyEtherEtherKetone (PEEK). This material has similar general properties as Semitron® ESd 520HR, but with the more chemically resistant properties of PEEK base material. Semitron® ESd 480 has static dissipative properties throughout – resistivity in the range of 10^6 to 10^9 . It is thermally stable to temperatures of 475°F (248°C) without degradation and offers high structural strength and stiffness combined with excellent dimensional stability.

Semitron® ESd 480 is also non-sloughing to minimize contamination due to wear so it is ideal for making nests, sockets and contactors for test equipment and other electronic device handling components. While typical carbon-fiber-enhanced products become irreversibly more conductive when exposed to moderate voltage, Semitron® ESd 480 maintains its dielectric performance while maintaining its mechanical properties.

In addition, Semitron® ESd 480 exhibits the excellent chemical resistance properties of standard PEEK, including resistance to weak acids, all alkalis, aliphatic and aromatic hydrocarbons, ketones, esters, chlorinated solvents, alcohols, and inorganic salt solutions (all at 73°F). Semitron® ESd 480 is not resistant to concentrated acids.

Semitron® ESd 500HR Static Dissipative Teflon (PTFE)

Semitron® ESd 500HR is a static dissipative reinforced PTFE (PolyTetraFluoroEthylene). This material has the same general properties as unfilled PTFE, but with static dissipative properties throughout – resistivity in the range of 10^{10} to 10^{12} . It is thermally stable to temperatures of 500°F (260°C) without degradation. Semitron® ESd 500HR offers high thermal insulation and a low coefficient of friction.

Semitron® ESd 520HR Static Dissipative Torlon® (PAI)

Semitron® ESd 520HR is a static dissipative reinforced PolyAmide-Imide (Torlon®). This material has the same general properties as Torlon® 5530, but with static dissipative properties throughout – resistivity in the range of 10^{10} to 10^{12} . It is thermally stable to temperatures of 520°F (270°C) without degradation. Semitron® ESd 520HR offers high structural strength and stiffness combined with excellent dimensional stability.

SEMITRON is a registered trademark of Quadrant Engineering Plastic Products.



About Roncelli Plastics

Since 1969, Roncelli Plastics has specialized in Precision Fabrication, CNC Machining, Die Cutting, Rapid Prototyping and Clean Room Assembly of plastic and non-metallic components. Our highly experienced staff of machinists, quality personnel, and supervisors is dedicated to delivering the best quality plastic and non-metallic components in the industry. Finished components are delivered to some of the largest and most well-known organizations in the world.

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