

Why is Protektive Pak's Dissipative Impregnated Corrugated Material the Best Choice for ESD Control Packaging?



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Protektive Pak's Dissipative Impregnated Corrugated material features a unique characteristic, a buried shielding layer. This provides a better value because unlike dissipative or conductive painted material, the buried shielding layer will not rub/scratch off or lose its ESD properties. This translates into a superior, longer lasting ESD safe package.



A common problem in the electronics industry is protecting static sensitive product when it is transported or stored outside an ESD Protected Area (EPA). In addition, the movement of circuit boards or other assemblies containing electronic components within a facility or shipping from subcontractor sites creates potential for ESD and physical damage. Protektive Pak's Dissipative Impregnated Corrugated material offers protection from both.

Coated material is simply a standard Kraft sheet with ESD properties painted or printed on the surface. This material is fragile and the ESD paint prone to scratch and rub off, for example, when leads from circuit boards scratch the side of the box or tape is removed from the exterior of the box. The more this occurs, the more compromised the material becomes making the sensitive components inside susceptible to Electro-Static Discharge (ESD).

When our dissipative impregnated corrugated container is enclosed (such as a lid in place), the buried shielding layer provides ESD shielding, protecting contents from electrostatic charges and discharges. Impregnated Corrugated material provides longer life with greater durability than painted materials. Abrasion test (test available upon request) of its thicker construction has shown no loss in particles at 100 cycles, only 1% loss for 200 cycles and 60% loss for 500 cycles. Similar tests have shown a 50% loss in particles in only 10 cycles and a 100% loss in 100 cycles with coated material.



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State-of-the art technology is used by adding carbon during the paper making process. The paper is a 6 layer process. The top surface layer is static dissipative measuring $1 \times 10^6 < 1 \times 10^9$ ohms. The conductive layer is the 5th layer from the surface measuring $< 1 \times 10^4$ ohms. Burying the conductive layer under a dissipative surface reduces the potential for a rapid discharge when contacted by a charged device. Manufactured by one paper mill using computerized controls also ensures consistent quality.

In addition, our Impregnated Corrugated containers are built to withstand the abuse of transportation and continuous reuse, making them potentially the least expensive packaging choice over time. Also, because the shielding layer is built into the corrugated material, the boxes will maintain a quality appearance much longer than painted or coated product as the black dissipative material will not flake off and reveal the brown corrugated material underneath.

A complete list of features of Protektive Pak's Impregnated Corrugated Material include:

- Shields ESD sensitive items from charges and electrostatic discharges when enclosed (such as with lid in place)
- Used as shipping, handling, and storage containers
- Constructed of impregnated corrugated material for greater durability than coated or painted material; carbon added during the paper making process results in thicker construction with static shielding properties that will not rub or scratch off
- Static dissipative surface resistance of $1 \times 10^6 < 1 \times 10^9$ ohms per ANSI/ESD STM11.11
- Buried shielding layer minimizes the potential of sloughing and abrasion contamination
- Products delivered assembled or flat with easy assembly without the need for tape, glue, or staples
- Made from 100% recycled material and is 100% recyclable
- Marked with ESD Protektive symbol as required by Packaging standard ANSI/ESD S541

