



Dr. Zap

Shielding Bag Basics:

Which one is right for you?



Confused about the language of static shielding bags and not sure which one is right for your application? It's no surprise considering the numerous static protective bag options available on the market and the technical jargon that accompanies them.

The basic element a bag must have to properly protect static sensitive electronic components is shielding capability through a Faraday Cage. Of the two main categories of static protective bags on the market (metallized bags and pink poly "antistatic") metallized bags are the only type of bag which safely protect and shield components against ESD.

When all factors are considered such as shielding capability, transparency, and durability, the metallized static shielding bags are recommended to effectively protect static sensitive components.

WHICH SHIELDING BAG IS RIGHT FOR YOU?

Bag Type	Surface Resistivity	Outer Surface	Light Transparency	MBB & EMI Protection	Construction	Cost	Applications
Metal In	<10 ¹²	>40%			Dissipative Polyethylene inner layer, metallized polyester layer, dissipative polyester outer layer	Lower	Electronic components, boards, assemblies where a slower dissipation rate is preferred and reuse is desired.
Metal Out	<10 ⁸	>30%			Dissipative Polyethylene inner layer, dissipative polyester layer, metallic layer, antistat coating		Electronic components, boards, assemblies where a slower dissipation rate is preferred. Military applications.
MBB	<10 ¹²	Opaque	X		Dissipative Polyethylene inner layer, metallized polyester layer, dissipative polyester outer layer	Higher	Components, boards, assemblies which require extra physical protection and MBB/EMI protection. Military applications requiring long-term dry pack storage.

To learn more about which bag is right for you, click [HERE](#).

PRODUCT UPDATES

New Product

41126-41132 - Jewel™ Workstation Continuous Mini Monitor



The Workstation Continuous Mini Monitor has been upgraded to Jewel™ status. The new monitors are designed to be used with our Jewel™ Wrist Straps, which are also available in Sapphire, Topaz, Ruby, Emerald, and Amethyst.

Click [HERE](#) for complete information on our Jewel™ Continuous Mini Monitors.

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New Product

41290 - Surface Resistance Test Kit



Our new Surface Resistance Test Kit is a portable, accurate, and versatile instrument to measure RTT and RTG in accordance ESD S4.1. It also measures ambient temperature and relative humidity when required for test records. It is easy to use and read using the color coded LED and digital LCD read-outs.

Click [HERE](#) for complete information.

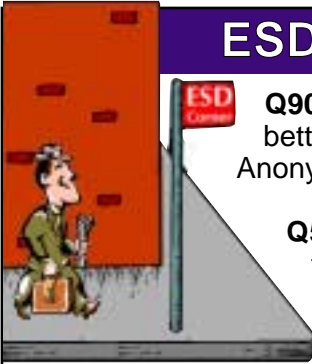
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ESD Q & A CORNER



Q909: Metal In vs Metal out bags. Which is better for ESD protection for PCBs?- Anonymous, Addison, IL - [see ANSWER 909](#)

Q564: We currently use shielding bags to transport static-sensitive products around our facility. Many employees feel that it is sufficient just to wrap a shielding bag around a product while carrying it short distances. I was under the impression that to be effective, products must be INSIDE the bag, and have even heard that wrapping a product can be more damaging than using no protection at all. Can you please clarify this, with justification as to why products must be inside the shielding bag? -Anonymous, North York, Ontario, Canada - [see ANSWER 564](#)

Q612: I am trying to break an old habit of using the protective bags as mats to lay the circuit card on to act as an ESD mat. Besides damage to the bags what are some other reasons to not use the bag in this manner. -Anonymous, Columbia, Maryland - [see ANSWER 612](#)

Q394: If parts (resistors, pwb) are placed inside a Pink Poly Bag at a grounded work station by a grounded worker, then will the bag still provide protection to the item, once the person is ungrounded and the product is moved to other areas of the factory? If not. what type of bag should be used? -Norma, Waco, Texas - [see ANSWER 394](#)

Q1008: How susceptible are devices in wafer form to ESD damage? And, what is the correct way to handle/package wafers to prevent ESD damage? -Anonymous, Cray Inc., Seattle, WA - [see Answer 1008](#)

[Find more ESD Q&As here](#)

New Product

11780- 11784 - Statfree® Conductive Ergonomic Flooring System-Type i Fused

Fused Type i combines the superior durability and patented* ergonomic properties of Statfree® Type i Rubber Interlocking ESD mats with the flexibility of multiple widths and lengths. Select from over 200 sizes to configure your area without interlocks that tend to come apart.



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New Product

Bag-In-Box Packaging For Our Floor Care Line



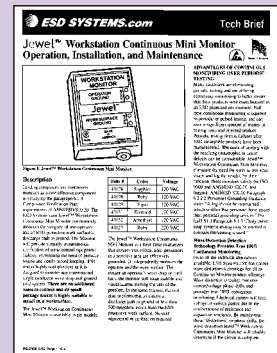
ESD Systems.com introduces our new Bag-in-Box packaging for our Statproof® Floor Care Products. Select packaging for optimal process, storage and environmental compatibility! Bag-In-Box packaging provides easier dispensing, is environmentally friendlier, and provides freight and warehouse savings.

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Our Products Come With Full Technical Support

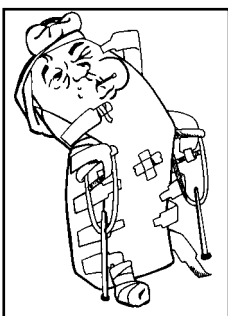
Product document support includes a technical brief, drawing or bulletin. These are referenced within our [on-line catalog](#) as well as listed in our [web site](#).

Click picture to view tech documents.



Hot Tip

What You Should Know About Latent Defects



Latent defects, meaning degraded or wounded components.

Latent defects are ESD damage that cannot be felt, seen, or detected through normal inspection procedures; ESD latent defects pass inspection as good, but may fail later and cause equipment down time and costly field repair work, adversely impacting customer satisfaction. ESD damage to electronic components can take the form of Latent Defects or Catastrophic Failures.

- 1) Latent Defect - component wounded but inspection passes as good
- 2) Catastrophic Failures - inspection is able to detect

To learn more about the dangers of latent defects, click [HERE](#).

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NEW ACQUISITION

Desco Industries acquired the assets of Spectrascan International Inc. Spectrascan manufactures test and monitoring equipment used in the manufacture of ESD sensitive components in electronic devices and assemblies.

This is a free monthly eNewsletter, which specializes on issues in electrostatic control in the semiconductor/electronics workplace and is best viewed while connected to the Internet.

Let us know what you think. Tell us what you would like to see in future issues. You are invited to contribute articles or other related information to our Newsletter. If you have any comments, suggestions or feedback about this eNewsletter, please send them directly to the editor@esdsystems.com, Thanks.