

ESD Protection Inside vs. Outside the ESD Protected Area (EPA): What's Different?

Requirements for *ElectroStatic Discharge Sensitive (ESDS)* items change based on your environment



INSIDE THE EPA
Protection by Design

OUTSIDE THE EPA
Protection That Travels

INSIDE THE EPA: PROTECTION BY DESIGN

An EPA is engineered to minimize static generation and safely dissipate or control electrostatic charges.

Personnel Grounding

ESD Work Surface

ESD Packaging Materials

Continuous Monitoring

Together, these elements create a controlled environment where harmful static discharges are unlikely to occur.

OUTSIDE THE EPA: PROTECTION THAT TRAVELS

Once an ESDS device or assembly leaves the controlled environment of the EPA, it becomes exposed to ungrounded personnel, uncontrolled handling conditions, and variable packaging environments during transport and at the point of delivery.

When ESDS devices or assemblies are shipped as anything other than fully finished, protected products, they must be safeguarded using qualified discharge shielding packaging materials.

Regular compliance verification of all ESD control items maintains the effectiveness of the system.

THE TRANSITION POINT: WHEN WE LOSE CONTROL

Inside the EPA, personnel grounding methods help ensure that the human body does not introduce ESD events to unprotected ESDS devices.

Wrist Straps

ESD Garments

Footwear / Flooring

Personnel grounding items may no longer be useful during the transition.

Grounding does not eliminate the need for ESD packaging materials inside the EPA. At a minimum, static-dissipative packaging materials are still required to avoid triboelectric charging and to minimize the CDM risk. Depending on the process, full discharge shielding may be reduced, but not entirely eliminated.

Discharge Shielding Bags

Moisture Barrier Bags

Closed ESD Totes

Approved Shipping Containers

FINAL THOUGHTS

The difference between handling ESDS items inside and outside the EPA comes down to personnel grounding methods and the appropriate use of ESD packaging materials.

INSIDE THE EPA

Protection relies on a controlled environment.

OUTSIDE THE EPA

Protection relies on proper ESD packaging materials.

ESD CONTROL IS A SYSTEM. UNDERSTAND THE BOUNDARY. PROTECT FROM START TO FINISH.



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