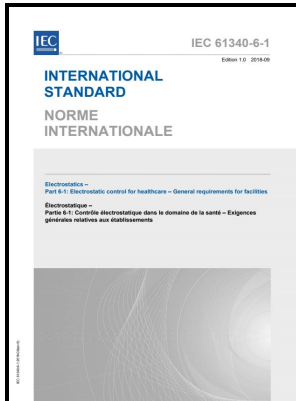


# Handbook of electrostatic discharge controls (ESD) - facilities design and manufacturing procedures

Van Nostrand Reinhold - 11 Steps to an ESD Control Program



Description: -

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Electrostatics.

Static eliminators.

Electric engineering -- Safety measures. Handbook of electrostatic discharge controls (ESD) - facilities design and manufacturing procedures

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Notes: Includes index.

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## ESD Fundamentals Part 3: Basic ESD Control Procedures and Materials

The need for personnel mobility and the use of cleanroom garments often make the use of wrist straps difficult. The operator is grounded via a wrist strap.

### 11 Steps to an ESD Control Program

Furthermore, the technical report elaborates on the causes of electrostatic discharges, and provides the following table to demonstrate its common sources: 1 is thoroughly descriptive on these topics to give the reader an incredibly strong understanding on why electrostatic discharge might occur in particular situations. There are several companies that make wall units where the user can walk up and put their foot on a pad while wearing their heel straps and then push a button for a quick test. Many objects integral to the semiconductor manufacturing process quartz, glass, plastic, and ceramic are inherently charge generating.

### EOS/ESD Fundamentals Part 3

Holding fixtures should be made of conductive or static dissipative materials when possible. When handling an entire circuit board though, it gets a lot more complicated.

### ElectroStatic Discharge

If a soldering iron used to repair an ESDS item were connected to the electrical ground and the surface containing the ESDS item were connected to an auxiliary ground, a difference in electrical potential could exist between the iron and the ESDS item. This combination of conductive or dissipative floor materials and footwear provides a safe ground path for the dissipation of electrostatic charge, thus reducing the charge accumulation on personnel. Gloves and Finger Cots Certainly, grounded personnel handling ESDS should not be wearing gloves or finger cots made from insulative material.

Operators should be grounded prior to handling. Air ionization is one component of a complete ESD control program, and not a substitute for grounding or other methods. As a IEC documents, they have world-wide applicability and are planned to be developed into full world-wide IEC standards in the future.

### **Controlling electrostatic contamination in cleanroom manufacturing**

If a soldering iron used to repair an ESDS item were connected to the electrical ground and the surface containing the ESDS item were connected to an auxiliary ground, a difference in electrical potential could exist between the iron and the ESDS item.

### **11 Steps to an ESD Control Program**

If the damaged component fails immediately, the result can be a board that fail tests and requires rework. Most cleaners include silicone, which spreads out in a thin layer upon the cleaned surface, giving it a fresh and shiny look.

### **ESD essentials: choosing the right ESD gloves**

Everything must be made of conductive or selected static dissipative materials, and reliably grounded. SOP 15-05 Page 1 of 8 Rev.

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