

HANDLING CLASS 0 ESD SENSITIVE ITEMS

Class Zero

ANSI/ESD S20.20 guides a user to enact an ESD Control Program to handle ESD sensitive items with a withstand voltage of 100 volts Human Body Model (HBM) or greater. Per ESD-STM5.1 Table 1 - HBM ESDS Component Classification Class 0 has a Voltage Range less than 250 volts.



If you handle Class 0 ESDS items, to decrease the probability of ESD damage additional precautions may be required including additional and/or more stringent technical requirements for ESD protective products, increasing redundancies, and more frequent periodic verifications or audits. Class Zero Workstations may be identified, and additional measures may include:

Ionization

- More stringent removal of non essential items from workstation
- Ionization to reduce charges on isolated conductors like devices on PCB's
- Ionization to reduce induction charging from process necessary insulators
- More stringent Balance (Offset Voltage) and/or Charge Decay Times
- Use only Ionizers with feed-back mechanisms and out of balance alarms

Grounding

- Use Continuous Monitors to verify proper grounding of operator and worksurface
- Specify more stringent resistance technical requirements such as 10^6 - 10^8 ohm dissipative worksurface
- Require ESD floor
- Require more reliable ESD footwear such as full coverage foot grounders (as opposed to heel grounders)
- Require improved grounding (using positive mechanical attachment) of carts, shelves, and equipment to ground
- Require dissipative material for all fixtures

Shielding

- Use ESD Smocks to shield ESDS from charges on operator clothing
- Use ESD packaging with shielding properties to store and transport ESDS both within and outside the ESD protected Area