

LEVELGUARD™ ESD FLOORING

GROUNDING PLACEMENT GUIDE

PURPOSE:

Grounding an ESD flooring system provides a controlled, permanent path to earth ground so that static charge is dissipated safely and predictably rather than building up on the floor.

- » Safely dissipate electrostatic charges generated by personnel and equipment.
- » Maintain all points of the floor at the same electrical potential.
- » Provide a controlled path to earth ground.
- » Meet ANSI/ESD and owner performance requirements.
- » Grounding does not protect personnel from electrical shock and should never be used as a substitute for electrical safety grounding.

APPLICABLE STANDARDS:

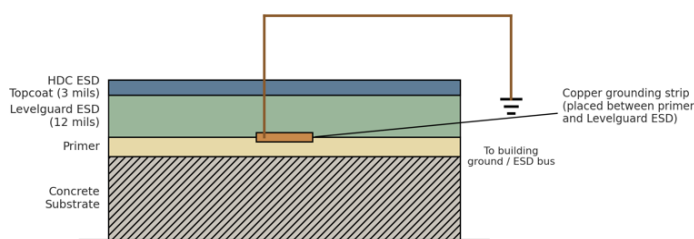
- » ANSI/ESD S20.20 — ESD Association program requirements
- » ANSI/ESD STM7.1 — Floor Materials Characterization
- » ANSI/ESD STM97.1 — Floor Resistance in Combination with Footwear
- » ANSI/ESD STM97.2 — Walking Voltage Generation
- » NFPA 70 — National Electrical Code
- » IEEE grounding recommendations, where applicable

SYSTEM BUILD & GROUNDING PLACEMENT

Standard ESD system is primer, copper grounding strip, Levelguard ESD conductive body coat, then HDC ESD topcoat. The grounding strip is installed directly on top of the primer, before the Levelguard ESD is applied — it must never be laid over a cured ESD coat or buried below the primer.

- » **Primer** (select one, at manufacturer's spread rate): MVB, Rapid H2O, or Levelguard
- » **Grounding strip:** installed on the primed substrate, before the conductive body coat
- » **Levelguard ESD conductive body coat:** 12 mils DFT
- » **HDC ESD topcoat:** 3 mils DFT

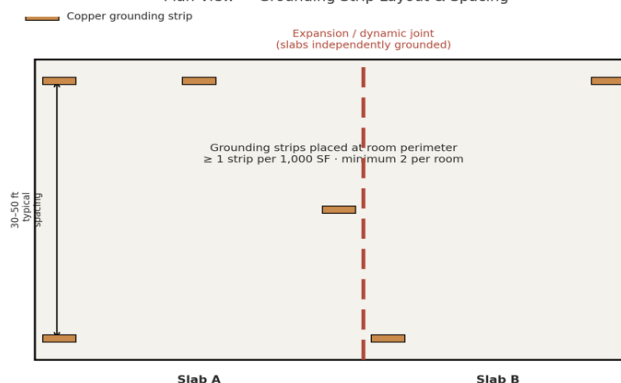
ESD Floor Cross-Section — Grounding Strip Location



GROUNDING STRIP LAYOUT & SPACING:

- » Minimum one grounding strip per 1,000 square feet of floor area.
- » Minimum two grounding strips per room, regardless of size.
- » Typical spacing of 30–50 feet between strips, laid at the perimeter of rooms.
- » Slabs separated by expansion or dynamic joints must be independently grounded — do not rely on a single strip to bridge a joint.
- » Recommended strip: McMaster-Carr 76555A644 copper grounding strip.

Plan View — Grounding Strip Layout & Spacing



GROUND CONNECTIONS:

Copper tape should terminate at designated grounding points, permanently connected — never temporary clips.

- » Minimum one grounding point per 1,000 square feet
- » Minimum two grounding points per room, whenever practical
- » Larger facilities require multiple redundant connections
- » Each grounding point should connect to the building equipment grounding conductor, a dedicated ESD grounding bus, and an approved grounding lug.

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WHAT NOT TO GROUND TO:

The following should not be relied upon unless specifically approved by the engineer of record and electrical code:

- › Structural steel alone · Reinforcing steel (re-bar) · Water piping · Gas piping
- › Random conduit · Concrete slab · Anchor bolts
- › NOTE: Only the building grounding system meeting NEC requirements should serve as the final grounding reference.

RECOMMENDED INSTALLATION SEQUENCE:

The following should not be relied upon unless specifically approved by the engineer of record and electrical code:

- › Install primer (MVB, Rapid H2O, or Levelguard) at the appropriate spread rate.
- › Install copper grounding strips on the primer — perimeter placement, 1 per 1,000 SF, 2 minimum per room.
- › Bond copper strips to approved grounding locations.
- › Install Levelguard ESD conductive body coat at 12 mils.
- › Install HDC ESD topcoat at 3 mils.
- › Allow full cure.
- › Perform electrical testing.
- › Submit test report.

COMMON INSTALLATION ERRORS:

- › Too few grounding points, or grounding only one corner of a large room.
- › Failure to connect copper tape to the building grounding system.
- › Painting over copper termination points, or cutting copper tape during later construction.
- › Using non-conductive patching materials, or assuming concrete provides an adequate ground.

For Professional Use Only

Please reference all product Technical Data and Material Safety Data Sheets prior to use. Mock-ups are strongly recommended to validate appearance and performance prior to use.

Sample Requests:

Please contact us at (720) 484-5160 to coordinate sample requests for your next project.

Check us Out Online!

- specs
- product data
- color cards
- & more!



Resinwerks
7205 Gilpin Way #200
Denver, CO 80229
www.resinwerks.com
(720) 484-5160