



# Ground Zero Electrostatics DuroStat – The DuroStat SMT Difference

## DuroStat / SMT Tiles for Static Control –the DuroStat Difference



DuroStat SMT SC/SD is designed specifically for the most demanding of manufacturing environments as well as clean rooms and labs requiring a low out gassing flooring material with exceptional wear characteristics in concert with the highest surface finish of ANY ESD tile on the market!

- ☀ Proprietary surface finishing techniques, ultimate scuff resistance and beautiful shine.
- ☀ Highest surface finish in the ESD industry.
- ☀ Excellent electrical properties
- ☀ Options in conductivity
- ☀ Conductive adhesive at no charge
- ☀ Grounding hardware at no charge
- ☀ No Wax Required, EVER...
- ☀ Highest PSI rating in the industry

Installation is clean, reliable and secure via substrate to tile bonding via our “GZ C-2000” water based conductive adhesive or “GZ-C2000-R” releasable adhesive if you floor requires deployable a installation. No more time consuming mixing required (as is the case with the black epoxy based adhesives, typical with many "standard" ESD Tiles). **Our adhesive features the highest resistance to concrete moisture emissions in the industry!**



### CONSTRUCTION

DuroStat SMT ESD control vinyl tile and GZ C-2000 conductive adhesive are components of a precision engineered system of advanced static control flooring. Available in SC (static-conductive) and SD (static-dissipative) our tiles contain proprietary encapsulated conductive elements distributed evenly *throughout* the tile to provide *exceptional*, electrically consistent, through-tile-to-ground charge decay. Unlike other ESD Tiles these encapsulated conductive elements retain their conductivity for life while providing the electrical assurance you can count on in the most demanding of environments



**Homogenous Vinyl Tile cross section, note conductive elements throughout thickness**

The performance of this solid vinyl tile is not dependent on wear layers, subsurface layers, internal antistats, or humidity and features a **lifetime warranty on electrical conductivity!**





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### Applications:



#### CLEAN ROOMS

DuroStat SMT ESD Control Vinyl Tile meets requirements in clean rooms as strict as class 10 based on its high tech know-how by over 700 research and manufacturing staff. It has no free carbon to contaminate the clean room, and low outgassing emission and is independent of room temperature and humidity. It is highly suitable for special clean room maintenance, Semiconductors, Optics, Aerospace, Pharmaceuticals, Biotechnology, ect.



#### ACCESS FLOORING

DuroStat SMT ESD Control Vinyl tile is suitable for use on access flooring, it can easily be perforated without risk of rough edges or the tile cracking or breaking. Major manufacturers of raised access flooring are experienced in the use of SMT ESD Control Vinyl Tile.



#### HEALTH CARE

DuroStat SMT ESD Control Vinyl Tile removes static to prevent data errors that may occur with high-tech visual medical equipment such as CT SCAN, MRI, and other sensitive equipment by static discharge.



#### ELECTRONICS MANUFACTURING ASSEMBLY, TEST AREAS

DuroStat SMT ESD Control Vinyl Tile is a permanently installed material that helps protect sensitive electronic devices, assemblies, and products from personnel-generated electrostatic discharge.



#### COMPUTER AND ELECTRONIC EQUIPMENT AND TELECOMMUNICATIONS ENVIRONMENTS

DuroStat SMT ESD Control Vinyl Tile controls static discharges into computer terminals or other sensitive electronic equipment, thus preventing damage to internal circuitry, incorrect entries or retrieval, loss of computer memory or other malfunction. It protects large data processing facilities, computerized typesetting and drafting equipment, process control equipment, communications installations, and other static sensitive equipment and

instruments.

### PROPERTIES & STANDARDS

**Electrical Resistance to Ground:** Per EOS/ESD S7.1

- Static Conductive (SC): 2.5E04 to 10E06 @ 10VDC
- Static Dissipative (SD): 10E06 to 10E08 @ 100VDC

**Static Decay:** Federal Test Method 101C, method 4046TW101B at 15% relative humidity:

- S/C <0.01 sec
- S/D <0.01 sec

**Static Propensity:** AATCC-134, Conditions: 68 deg, RH @ 40%, Underlayment, earth grounded metal plate (**non-conductive Neolite foot ware**)

- S/C step <50 V+, scuff <75 V+
- S/D step <100 V+, scuff <150 V+



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**Static Propensity:** AATCC-134, Conditions: 68 deg, RH @ 40%, Underlayment, earth grounded metal plate, Soles Neolite XS 664 with static dissipative polyurethane heel grounders: **(conductive foot ware):**

- S/C step <10V +, scuff <20V+
- S/D step <15V+, scuff <30V+

## Other Properties

**ASTM F 1700:** Passes

**Underwriters Laboratories:** Meets UL Standards

**NFPA Life Safety Coded 101, Class 1 Int. Floor Finish**

**Static Conductivity:** >1.08 W / cm<sup>2</sup>

**Static Dissipative:** S/D>1.03 W / cm<sup>2</sup>

**Smoke Density:** (ASTM E 662) <450

**Slip Resistance:** Meets or exceeds Federal standards and A.D.A. recommendations of .6 for flat surfaces.

**Dimensional Stability:** Meets or exceeds Federal Specification SS-T-312B, Type III, Vinyl Tile.

**Flexibility:** Meets or exceeds Federal Specification SS-T-312B, Type III, Vinyl Tile

**Standard Availability:** (2.0 mm or 3.2 mm all sizes and colors): 12" x 12", 24" x 24", 36" x 36".

**Static Load Limit:** (Modified ASTM F 970-93) 2,500 psi

<b>Chemical Resistance:</b> 1 Hour Exposure Time	
Sulfuric Acid (Conc.) 95%	No effect
<a href="#">Sulfuric Acid (77%)</a>	No effect
Sulfuric Acid (5%)	No effect
<a href="#">Nitric Acid (Conc.)</a>	Very slight surface attack
Nitric Acid (5%)	No effect
<a href="#">Hydrochloric Acid (Conc.)</a>	No effect
Hydrochloric Acid (5%)	Very slight surface attack
<a href="#">Acetic (Conc.)</a>	No effect
Acetic (5%)	No effect
<a href="#">Sodium Hydroxide (50%)</a>	No effect
Ammonium Hydroxide (28%)	No effect
<a href="#">Methyl Alcohol</a>	No effect
Ethyl Alcohol	No effect
<a href="#">Butyl Alcohol</a>	Very slight surface attack
Phenol	No effect
<a href="#">Benzene</a>	No effect
Xylene	Very slight dulling
<a href="#">Cresol</a>	No effect
Gasoline, Mineral Oil	No effect
<a href="#">Chloroform</a>	No effect
Carbon Tetrachloride	No effect
<a href="#">Trichlorethylene</a>	No effect
Acetone	Slight surface dulling
<a href="#">Methyl Ethyl Ketone</a>	No effect
Amyl Acetate, Ethyl Acetate	Slight brown stain
<a href="#">Silver Nitrate (40%)</a>	No effect
Ethyl Ether	No effect
<a href="#">Formaldehyde (40%)</a>	Yellow stain
Iodine	



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